New Zealand DEFENCE FORCE
Te Ope Kātua O Aotearoa

C.H.E.S.S.

DEI Construction Health, Environment & Safety Specification

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A FORCE FOR NEW ZEALAND

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For the purposes of continual improvement, this document will be reviewed at least every 12 months from the last publish date.

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As a role accountable through the Vice CDF for the safe management of the Defence Estate and Infrastructure and the Principal Sponsor (as per DFO 071 (Defence Force Safety), chapter 2, para 2.11.(3) and DFI 0.74, chapter 1, Para 1.3) respectively, the Head of Defence Estate and Infrastructure has issued this publication to meet NZDF obligations under Defence Force Act 1990, Health and Safety at Work Act 2015, and Defence Force Orders 071 (Defence Force Safety), DFI 43.3 Chapter 1 - Applying a Health and Safety System to the Estate (when in force), DFI 0.74 (Contractor Safety Management) and DFI 0.81 (Risk Management Instructions).

TE OPE KĀTUA O AOTEAROA
DEFENCE FORCE

Chief of Defence Force
HEALTH & SAFETY STATEMENT

OUR SAFETY VISION:

Everyone in the New Zealand Defence Force is responsible for safety in everything we do.

MY COMMITMENT:

I am committed to keeping our people and the public safe.
I am committed to resourcing and pursuing excellence in safety through our systems, procedures, collaboration, consultation and participation.
I am committed to preventing harm from unacceptable behaviours such as sexual harassment and bullying.
I cannot achieve this without your participation.

AM Kevin Short
Chief of Defence Force
8 August 2022

OUR SAFETY FOUNDATION:

Our NZDF core values are the foundation that supports our safety framework. They motivate us to do more than simply comply with all Health and Safety legislation. Everyone in the NZDF is to demonstrate:

- **Tū Kaha** | Courage to speak up when we see a situation that may cause harm;
- **Tū Tika** | Commitment to working in a safe way, from individual responsibility, to safety leadership, and respectful relationships;
- **Tū Tira** | Comradeship by looking out for each other's safety; and
- **Tū Māia** | Integrity by doing safety right, even when no one is watching.

WE WILL:

- Take action by minimising risk to ourselves and others as far as possible;
- Continuously improve our safety system through reporting safety events, concerns and subsequent actions; and
- Demonstrate our safety values at all levels wherever we work, train and operate.

HEI MANA MŌ AOTEAROA
A FORCE FOR NEW ZEALAND

PREFACE

The Defence Force's aim is zero deaths or injuries on its camp or base construction sites.

In the context of New Zealand's Construction sector this is a difficult challenge as time and financial pressures and inexperience causes contractors and workers to ignore or not apply safety measures. Managing busy worksites is hard, particularly when integrating specialised contractors and workers on short-term assignments into the worksite workforce.

The Defence Force leads by example, and its health and safety leadership approach is no different. Government procurement rules define it as the 'Purchasing PCBU' and require it to set clear expectations for health and safety and to monitor health and safety performance. A key and critical function of its role is to safely manage communications and activities across multiple sites, diverse locations and dozens of projects.

With this in mind, DEI's Health and Safety Team developed the *Construction Health, Environment and Safety Specification* (CHESS) and is the core of DEI's Health and Safety Management System and Framework. It sets out policy and health and safety specifications for camp or base construction sites and construction activities and states how DEI measures compliance with them.

CHESS informs the Contractor/FM Provider's safety plans and ensures that those plans reflect the construction project, PMP works, or maintenance task's scope. It also removes the problem of multiple site-specific safety plans for a single project. Under CHESS, the Contractor/FM Provider is responsible for ensuring all sub-contractors adhere to a single plan. Sub-contractors can focus on making their work method statements, job safety analysis and risk assessments function as intended.

CHESS is built on and informed by standard process, good practice, New Zealand and International research and hard-learnt lessons. CHESS aligns with ISO 45001, AS/NZ4801 and the (revoked) OHSAS 18001 health and safety standards.

CHESS assists the Contractor/FM Provider by providing evidence and documentation for prequalification schemes, external and internal company audits, and support demonstrating the *so far as is reasonably practicable* requirement of the Health and Safety at Work Act 2015. It encompasses multiple sub-systems, templates and processes that contractors must follow to adopt and integrate within their existing systems. CHESS is an evolving document, and DEI looks forward to industry input to improve its value to construction and maintenance contractors.

Not all CHESS specifications apply to every project. While there is a mandatory section for Contractor/FM Provider construction activities, the larger part is only applicable to the scope of works being undertaken by the Contractor/FM Provider e.g. if not using underwater remote vehicles on the worksite, then that section is not applicable.

CHESS is a comprehensive resource for the many construction activities occurring on the Defence Estate, and it ensures Contractor/FM Provider develop robust safety management plans showing how safety is managed between all parties and how the Defence Force's expectations will be met.

Welcome to the team.

Rian Engelbrecht

Deputy Director Health and Safety

Defence Estate and Infrastructure

June 2024

New Zealand DEFENCE FORCE
Te Ope Kātua O Aotearoa

DEFENCE ESTATE & INFRASTRUCTURE

COMMITMENT TO WORKSITE HEALTH AND SAFETY

SAFE PLACE, SAFE PEOPLE, SAFE ESTATE

Mark Brunton
Head of Defence Estate and Infrastructure
October 2022

OUR COMMITMENT:

Defence Estate and Infrastructure (DEI) is committed to achieving excellence in safety through effective worksite safety systems and processes for of all our workers (staff and contractors).

To achieve that, DEI developed and implemented the CHESS system. It is an all-encompassing worksite safety management system incorporating policies and processes which provide assurance that all DEI construction activities are carried out safely and meet the highest levels of safety performance and industry best practice.

OUR OBJECTIVES:

- Support NZDF operational activities through the supply and maintenance of safe estate infrastructure.
- Provide and maintain safe systems of work for estate infrastructure construction activities.
- Reduce the risks arising from Defence Estate operations to a level that is as low as reasonably practicable.

WE WILL:

- Demonstrate, support and reinforce NZDF's Core Values in the operation of worksite safety systems
- Promote the benefits of improving worksite health and safety across DEI and the entire Defence Estate.
- Support DEI's worksite health and safety framework and clearly set out everyone's responsibility for worksite safety within DEI.
- Effectively resource DEI's health and safety personnel and systems.
- Minimise worksite risks by recognising current and future infrastructure hazards and the best ways of managing those risks.
- Apply DEI's health and safety by design system to all projects.
- Train DEI workers in health and safety hazard awareness and worksite risks.
- Inform our contractors and stakeholders of worksite hazards.
- Ensure contractors are competent to work safely.
- Empower our contractors to take necessary actions to minimise health and safety risks.
- Empower our contractors to stop work when they feel that the risks to health and safety are too great to continue.
- Investigate incidents thoroughly to learn from events and prevent reoccurrences.
- Report regularly and openly on our health and safety performance against our objectives and targets.
- Establish and operate a health safety review and ongoing improvement process.

EVERYONE GOES HOME SAFE AT THE END OF EVERY DAY

A FORCE FOR NEW ZEALAND

STOP WORK AUTHORITY

The DEI Stop Work Authority is a reminder to all DEI staff and contractors that they have a legal right to refuse to undertake certain work as per §83(1) of the Health and Safety at Work Act 2015. This section states:

'A worker may cease, or refuse to carry out, work if the worker believes that carrying out that work would expose the worker, or any other person, to a serious risk to the worker's or other person's health or safety arising from an immediate or imminent to a hazard'

A Stop Work Authority (SWA) can also apply where persons believe that others are placing themselves in a situation that exposes them, or others to hazards. It includes situations where incompatible work activities encroach upon or interfere with one another creating the potential for an incident. The SWA may affect *Permitable* works, Job Safety Analysis and other relevant documentation.

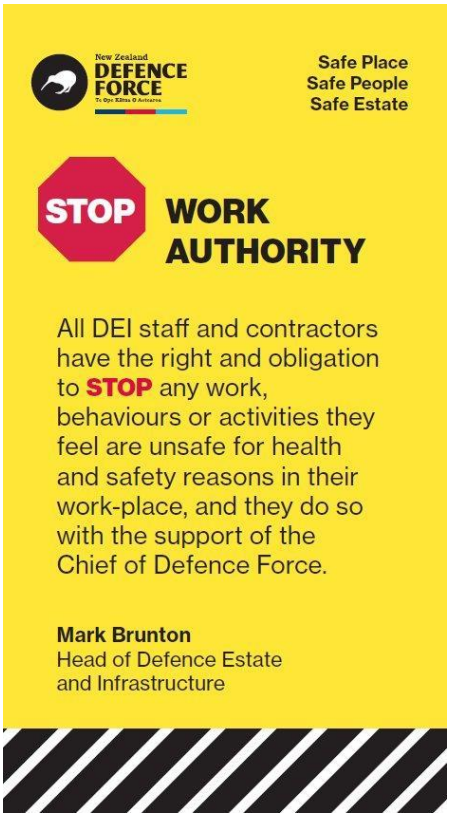
Any Contractor/FM Provider and their subcontractors must be issued the DEI Stop Work Authority card. The DEI SWA card is a reminder that speaking up about safety is a legal right and is encouraged by the Chief of Defence and Head of Defence Estate and Infrastructure's values and commitment to health and safety. It is not required to be displayed or presented to any persons in order for it to be exercised. The Contractor/FM Provider must encourage workers and sub-contractors to speak up with regards to health and safety, with no retribution, intimidation or disciplinary action exercised upon any person who uses the SWA in good faith.

DEI envisions that in most cases, workers would only exercise the SWA for minor events, and that supervisors will quickly return the situation to a safe state, or modify any unsafe behaviour. However, should the SWA not be minor in nature, Contractor/FM Provider's must escalate the issue to a DEI Official at the earliest possible opportunity. Work is not to resume until the concerns raised in the SWA are appropriately addressed and the situation and hazard have been modified to a state that is safe, so far as is reasonably practicable. If the matter cannot be resolved with Contractor/FM Provider it must be escalated to the appropriate DEI Official.

The Contractor/FM Provider must maintain records of SWA usage, including recording them in the NZDF Joint Assurance Reporting System (JARS). Site Managers and Team leaders must share any Stop Work Authority actions at the following daily prestart for the project/works

Key steps when using the DEI SWA are:

- Identify the unsafe situation, behaviour or uncontrolled hazard;
- Alert potential affected persons to the danger;
- Remove self and others away from the danger;
- Discuss the issue and agree to stop work until all parties involved agree it is safe to proceed;
- If a solution is not achieved, the Contractor/FM Provider must inform DEI and a risk assessment must be conducted to determine if appropriate risk management is applied to the situation;
- When resolved the person raising the SWA should be recognised in a positive manner;
- The Construction Safety Management Plan/Facility Maintenance Safety Management Plan should be updated to capture the lessons learnt where applicable; and
- The SWA details shared at the next site Toolbox and/or prestart meeting.



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GLOSSARY

Table 1. Descriptions and definitions of terms as used in CHESS.

TERM	DEFINITION/DESCRIPTION
AES	Advanced Encryption Standard. Symmetric cipher the uses the same key to encrypt and decrypt data.
Asbestos Removalist	A PCBU holding either a Class A or Class B license for asbestos removal, or an unlicensed PCBU that removes asbestos. A Class A license holder may remove any type or quantity of asbestos containing material (ACM) including any amount of friable asbestos or ACM and any amount of asbestos. A Class B license holder may remove asbestos contaminated dust or debris (ACD) associated with removing any amount of non-friable asbestos or ACM., Unlicensed asbestos removalists may remove bonded asbestos (non-friable) up to $10m^2$ pf non-friable asbestos or ACD associated with the removal of that amount of non-friable asbestos, cumulatively over the course of the removal project. ACD is not associated with friable or non-friable asbestos and is only a minor contaminant.
Audit	A regular formal audit of contractor systems and processes carried out by DEI officials. The project's CSML Score determines the frequency of DEI audits and spot inspections.
Authorised DEI Official	A DEI person approved to issue a Permit to Work. The authorised DEI official can suspend or cancel a Permit to Work for any reason.
Buildings	Temporary or permanent movable or immovable structures (including a structure for occupation by people, animals, machinery, or chattels), as per the Building Act 2004.
Cancelled Permits	Permits are cancelled because of worksite emergencies, non-conformances, or because they are no longer required because of a worksite process planning change or altered construction materials scheduling.
CAPEX	Capital Expenditure - Monies spent on 3910/3916 contract works designed to improve the value of NZDF assets, as distinct from OPEX maintenance activities.
CHESS	Construction Health, Environment and Safety Specifications. CHESS sets out the NZDF/DEI requirements and expectations from contractors in the areas of health and safety, in order to meet its primary duty of care obligations and responsibilities in the Health and Safety at Work Act 2015.
CHIPS	Construction H&S Indicative Performance System. A performance assessment system that regularises health and safety performance compliance assigning points to health and safety outputs and outcomes over the course of the project.
CMP	Construction Management Plan. The Construction Management Plan is the overall construction project plan that scales to the size of the project, and may involve managing a range of sub-projects to ensure movement of traffic, plant, materials, and work-site activities occur harmoniously without clashes.
Collective Hazard	The product of worksite and/or camp or base activities, which individually are not a hazard, but when occurring concurrently create a hazard.
Confined Space	Defined as an enclosed or partially enclosed space that is at atmospheric pressure during occupancy and is not intended or designated primarily as a place of work and may have potential atmospheric or physical hazards. Also, activity occurring wholly or partly in a confined workspace as defined in *AS 2865:1995 Safe Working in a Confined Space*.

TERM	DEFINITION/DESCRIPTION
Construction Stages	Construction Stages are periods during which broadly aligned activities occur, e.g. site preparation, excavation, horizontal works, foundations, vertical works, roofing, cladding, internal fit out, commissioning, decommissioning etc.
Contract Administrator (Engineer to Contract)	The professional engineer, architect, surveyor, or other one natural person named or identified in the 3910 Special Conditions or such other natural person as may be subsequently appointed by the Principal (NZDF) under (NZS 3910:2023) to act as Contract Administrator (Engineer to the Contract). The Contract Administrator shall not be a body corporate or firm.
Contractor, the	A PCBU as defined in Section 17 of the Health and Safety at Work Act 2015, and the legal entity engaged directly by DEI for a construction project on a NZDF worksite that is primarily responsible for delivering the project and hiring and managing sub-contractors for it. Also referred to as the 'main contractor'.
Control	A mechanism or method for removing or reducing the probability of an identified risk.
CoPTTM	Code of Practice for Temporary Traffic Management. New Zealand standard reference for all temporary traffic management on state highways and local roads.
Corrective Actions	Corrective measures that may include: • Eliminating the hazard; • Engineering alternative outcomes to lower the risk; • Minimising the risk; • Improving risk management measures; and/or • Providing worker training to reduce the risk.
CSML	The Construction Safety Monitoring Level. A scoring model that sets the frequency of DEI inspections and audits. A range of project factors form the base of CSML Scores and are reassessed and reset at the beginning of construction stages and/or as required depending on the works.
CSMP	The Construction Safety Management Plan. The document required by DEI through a variation to the NZDF Construction Contract (at the time of writing, NZS 3910:2023). It is the companion of the CMP, and follows the same timeline as the CMP. It assists the Contractor in managing a range of issues including Health, Safety, Environmental and Quality aspects on site in a harmonious manner, as well as ensuring actions on one part of the worksite do not endanger activities on another part of the worksite. Depending on the CSML score for works occurring under a FMSMP, contractors may be required to prepare a separate CSMP for individual works.
Dangerous Goods	Substances that have explosive, flammable, toxic, infectious, corrosive or environmentally hazardous properties and containers that have held dangerous goods. Class 1 – Explosive materials Class 2 – Gases Class 3 – Flammable Liquids Class 4 – Flammable Solids Class 5 – Oxidising Substances and Organic Pesticides Class 6 – Toxic and Infectious Substances Class 7 – Unallocated Class 8 – Corrosive Materials

TERM	DEFINITION/DESCRIPTION
	Class 9 – Miscellaneous
DDS	Directorate of Defence Security. The department responsible for the security of NZ Defence Camps and Bases.
Defence Officer of Compliance (DOC)	Defence Officers of Compliance have overall responsibility and accountability for the evaluation of applications for, and issuing of, Permits to Work on the Defence Estate. DOCs also conduct contractor inductions and compliance checks. DOCs are responsible for: • Reviewing Permit to Work applications for appropriate risk mitigation controls and evidence of competent work practices; • Issuing and holding electronic and hard copies of each live and suspended *Permit to Work*; • Consulting with SIMOPS and other stakeholders to ensure permits will not conflict with other permits, site activities or Camp/Base activities; • Receiving and recording closed, cancelled and suspended permits; • Facilitating in-person or online NZDF induction training for contractors and their workers; • Assisting Contractors in the identification of on-site hazards; and • Assisting EDDs to maintain oversight of compliance schedules. The DOC can suspend or cancel a Permit to Work for any reason.
DEI	Defence Estate and Infrastructure. The NZDF unit responsible for managing and maintaining the New Zealand Defence Force Estates.
DEI Official	The DEI employee monitoring the worksite. The official's roles may include conducting NZDF/DEI inductions, issuing Permits to Work, inspecting and auditing the worksite's plant, equipment, activities, and workers and contractor processes and procedures, and any other duties required by CHESS and DEI. May include Estate Deputy Directors (EDD), Project Managers (PM), Project Officers (PO), Defence Officers of Compliance (DOC),and Regional Health and Safety Specialists (RHSS).
Demolition	Total or part destruction and removal of a building or structure.
EDD	Estate Deputy Director – The DEI staff member managing construction or maintenance performed at a camp or base or other Defence sites. For the purposes of this procedure, EDD also refers to any delegate of the EDD or the Project office.
Environmental Officer	A DEI Official nominated by DEI Environmental Services to advise on the DEI requirements relating to environmental issues on Defence Estate.
FLOC	Functional Location Object Code. A system that enables identification of the location and the purchase, maintenance history and likely replacement date of individual Defence Estate assets.
FM Permit Issuer (FMPI)	FM Permit Issuers authorised to evaluate, consult on and issues Permits to Work for FM Provider capital projects, PMP works, and scheduled and unscheduled maintenance tasks undertaken by the FM Provider on behalf of NZDF. FMPIs may conduct FM worksite inductions and compliance checks. FMPIs must comply with NZDF Permit Assurance (PTW D) requirements and DEI Permit to Work processes. They are also responsible for ensuring the works they issue PTWs for do not conflict with other base activities and PTWs. The FMPI can suspend or cancel a Permit to Work they have issued for any reason.

TERM	DEFINITION/DESCRIPTION
FM Provider	A company contracted by NZDF to provide and manage Facilities Maintenance activities on NZDF Camps and Bases.
FMSMP	Facilities Maintenance Safety Management Plan – FM Providers act as the Contractor for a range of works on NZDF camps and bases, including work sub-contracted to 3rd party contractors and contractors directly employed by the camp or base. As the work may range from minor to major, based on the value and complexity of the work, the FM Provider must prepare and maintain an overarching FMSMP which sub-contractors must adhere to when working for the FM Provider.
FSO	Facilities Support Officer – Support Facilities Management operations on the camp or base.
Good Practice	Range of legal requirements, approved codes of practice, Safe Work Instruments, other recognised/approved safety guidelines and accepted professional/industry practices and standards providing for health and safety in the construction industry.
Hazard	**A thing or process that can cause harm.** A **hazard** is anything that is a potential source of harm or damage to people, plant, equipment or environment.
HAZID	*Hazard Identification*. A common process providing a systematic assessment to identify hazards and problem areas associated with plant, system, operation, design, and maintenance.
HAZID Analysis Register	A register of a projects likely collective hazards, risks and hazard management solutions derived from a HAZID analysis performed before a project commences.
HSR	Health and Safety Representative. A worker elected by co-workers to represent them in discussions with management regarding Health and Safety aspects of a workplace.
ICAM	Incident Causality Analysis Method. An industrial safety initiative that provides the ability to identify what really went wrong in an incident. An ICAM also makes recommendations on necessary remedial actions to reduce risk and build error-tolerant defences against future incidents.
Incident	A near miss, injury causing and/or environmental accident, lost-time injury, or fatality.
Inspection	Undertaken by contractors, inspections check worksite activities and sub-contractor and subordinate contractor systems and processes, plant, and equipment. Contracted third parties may undertake inspections on behalf of the Contractor.
JARS	Joint Assurance and Reporting System. JARS is the primary tool for DEI engaged contractors to record details of incidents, inductions and PTWs for work that occurs on the Defence Estate.
JSA	Job Safety Analysis. A JSA is a procedure that helps integrate accepted safety and health principles and practices into a particular task or job operation. A Job Safety Analysis identifies potential hazards in each basic step of the job and recommends the safest way to do the job. Also referred to as a Job Hazard Analysis (JHA) or a Task Analysis (TA).
Just Culture	A concept where management or authorities do not blame individuals for 'honest mistakes' and only hold them accountable for willful violations and gross negligence. People are more willing to inform an organisation about problems and mistakes if they are not likely to be punished or prosecuted for them.
KPI	Key Performance Indicators. Indicators that measure of progress toward specific health and safety goals and of trends enabling allocation of resources to support improvements.

TERM	DEFINITION/DESCRIPTION
Lagging Indicators (after the loss)	Measures that provide an overview of performance, such as tracking injury statistics, exposure incidents, and regulatory fines. E.g. Total Recordable Injury Rate; Lost time frequency; Severity; Number of days restricted; Compensation for losses for workers; and Near miss reporting.
Leading Indicators	Passive – strategies and actions established prior to the initiation of a project that serve as predictors to the project's safety performance – not alterable after the project begins. Active – Measured and adjusted during the construction stage enabling positive responses that improve safety and allow monitoring and measures which enable prediction of future performance results, e.g. Number of audits performed; Number and types of findings and observations; Timeframe required to close action items; Training completed; Near miss incidents; Timely preventative maintenance tasks performed; and Safety committee meetings.
Legal Privilege	Principle that ensures the confidentiality of communication between a solicitor and a client. It also applies to communication between a party to a proceeding and any other person and communication between the party's legal adviser and any person. It also applies to information compiled or prepared by, or at the request of, the party or the party's legal adviser.
Maintenance	Care and/or upkeep that is planned, routine or urgent that keeps a building or structure in a proper condition or working order. It is incidental work that can be done relatively quickly and safely with relevant health and safety control measures.
Major Non-Conformance	Breach of Health and Safety at Work Act 2015 (or subsequent amendments), other health and safety legislation, and associated regulations, approved codes of practice, and relevant Defence Force Orders and Defence Force Instructions
Manual Handling	Any activity requiring a person to lift, lower, push, pull, carry, throw, move, restrain, hold or otherwise handle any animate or inanimate object and can generate serious back injuries and other musculoskeletal disorders.
MEWP	Mobile Elevated Work Platform. Mobile platforms that can adjust the height of the working platform.
Minor Non-Conformance	Breaches of WorkSafe Guidance documents, relevant standards and CHESS instructions.
Monitoring	The process for tracking the implementation of risk control measures, and measuring their effectiveness.
Must and Should	'Must' refers to requirements that are mandatory for compliance with legislation and CHESS requirements. 'Should' refers to matters that are recommended.

TERM	DEFINITION/DESCRIPTION
Non-Conformance Notification	Where an inspection, spot inspection or an audit identifies a non-conformance, the inspector or auditor will issue a Non-Conformance Notification. The other party must then prepare a Non-Conformance Report.
Non-Conformance Report	A report prepared by the Contractor or DEI officials after a contract non-conformance is identified and notified to the at-fault party. It identifies the reasons for the non-conformance and sets out remedial actions the at-fault party must undertake before the non-conformance is closed.
Non-Conformity	A failure to meet a requirement set in statute, statutory instrument or contract arrangement.
OIC Defence Area	The commanding officer of the NZDF camp or base.
OPEX	Operating Expenditure – Monies spent on maintenance works on NZDF assets.
Paint Disturbance Activities	Strategies that encounter, eliminate or mitigate paint exposure. These include, encapsulation, surface replacement or paint removal.
Permitable	Tasks or actions that require a Permit to Work.
Permited	Tasks or actions that have been granted a Permit to Work.
Prescribed Risk Management Process	As set out in Regulations 5-8 in the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.
Project Manager	The PM is responsible for actively managing the construction project, including some health and safety elements, including: • Ensuring contractors produce and keep relevant project documentation; • Ensuring Contractors provide accurate and timely Lost Time Injury and Incident reports; • Discussing performance scores with Contractors, identifying any issues and taking appropriate action; • Ensuring the Contractor has accurately notified DEI and recorded hazards and risks on the site, through inspection of the project hazard register; • Performing regularly spot checks on the operation and worker compliance of Job Safety Analysis requirements and specifications; • Determining the frequency of inspections through the Construction Safety Monitoring Level (CSML) of specific projects; • Reviewing and endorsing/rejecting Contractor *Construction Safety Management Plans (CSMP)* and *Facilities Maintenance Safety Management Plans (FMSMP);* and • Assisting Contractors in the identification of on-site hazards. In the event of an incident occurring, the PM is responsible for: • Assisting any injured staff and ensuring the safety of other personnel in the vicinity affected by the incident; and • Ensuring the Contractor has notified WorkSafe New Zealand of the incident, if required, and informing the DEI Regional Health and Safety Specialist (RHSS).
Project Manager	The DEI/FM Provider official responsible for managing the construction project.
Project Officer	A specialist project manager working for an EDD or FM Provider to manage a specific DEI/FM Provider project or projects on a camp or base.

TERM	DEFINITION/DESCRIPTION
RCD	Residual-current Device. An electrical protection device that quickly breaks an electrical circuit to prevent serious harm from electric shock. Also referred to as a residual-current circuit breaker (RCCB).
Refurbishment	Carrying out work in a building or structure with the emphasis on changing and/or upgrading it.
Regular	A frequency of activity determined by the CSMP or FMSMP (and the CSMP/FMSMP Score for DEI officials).
Regulation	A rule or directive made and enforced by a legally empowered entity.
Revalidation	The reassessment of the worksite and permit conditions to determine if work can continue safely for another set period of time.
RFID	Radio Frequency Identification. A form of wireless communication using radio frequencies to uniquely identify objects or people.
RHSS	Regional Health & Safety Specialist. A DEI official based in the regions providing health and safety oversight, inspection, audit, investigative and advisory services to DEI projects and Facility Maintenance by DEI engaged contractors. RHSS' also mentor and advise Docs and may be authorized to evaluate applications for and issue Permits to Work. RHSS are responsible for: • Performing scheduled and spot inspection checks of Health and Safety requirements and specifications on DEI engaged Contractor and FM Providers work sites. • Reporting non-conformance inspection items to the Contractor and FM Providers as Non-Conformance Notifications. • Reviewing corrective or preventative actions indicated by Non-Conformance Reports and notifying the Contractor/FM Providers of the CHIPS resulting score. • Reviewing corrective or preventative actions resulting from significant events and/or major non-conformance items within thirty days and again at six months to ensure conformance. • Assisting Contractors/FM Providers in the identification of on-site hazards. • Reviewing and endorsing Specification Amendment (SPA) requests.
Risk	The likelihood that a hazard causes harm.
Safe	Meaning 'safe, so far as is reasonably practicable'.
Safety Meeting	Formal worksite meeting – usually used to update workers on project, notify them of health and safety issues, and announce any other worksite matters or activities affecting their duties.
Satisfactory	The condition whereby an expectation or need has been met acceptably.
SDS	Safety Data Sheet. (Also referred to as a Material Safety Data Sheet (MSDS)). Safety Data Sheet must accompany all hazardous materials and contains information relating to the safe storage, use, relativity, First aid treatment and other relevant details about the substance.
Separate Contractors	Some NZDF/FM Provider contracts involve more than one main contractor, such as separate main contractors constructing horizontal and vertical project elements, with a further main contractor engaged to supply and install furniture, fittings and equipment.

TERM	DEFINITION/DESCRIPTION
SFAIRP	'So far as is reasonably practical.'
SIMOPS	Simultaneous Operations. A management process (or group) designed to collate and manage conflicts between activities across all facets of a Camp/Base.
SIMOPS Controller	The person empowered by the camp or base to manage SIMOPS operations.
SPA Request	Specification Amendment Request for requesting a change to a CHESS policy requirement, process or procedure - when a contractor determines that an alternate approach will provide a more appropriate output or outcome according to the circumstances, the Contractor applies to DEI to make the requisite change.
Spot Inspection	An irregular inspection occurring outside the frequency set by the project's Construction Safety Monitoring Level (CSML) score undertaken by a DEI official solely or in company of a contractor representative. Contracted third parties may undertake spot-inspections on behalf of DEI.
Stage Transition Milestones	Milestones defined within a project that indicate distinct stages a project progresses through. For example, ground preparation, laying foundations, construction, etc.
Sub-Contractor	A PCBU sub-contracted by a contractor to deliver specific tasks on a worksite.
Subordinate Contractor	A PCBU employed by a sub-contractor to undertake specific tasks on a worksite. Subordinate contractor encompasses many layers of sub-contractor relationships below the sub-contractor layer.
Supervision	The process by which an entity with authority and accountability monitors the activities, practice and performance of other entities.
Systematic Risk	A risk created by the confluence of process or system elements.
Task	Any discrete activity on a worksite, e.g. erecting scaffolding, installing a window, laying a concrete floor.
Team Leader	A worker designated as a team leader in normal work circumstances as well as in emergencies.
Tool box meeting	Refresher training on high risk tools e.g. grinders, skills saws, scaffolding, ladders, harness use or activity/process. Recorded as worker training.
Training	The process by which people develop new or improved skills.
UN Number	United Nations number. An internationally recognised four-digit number used to identify hazardous chemicals and materials. Normally found in Safety Data Sheets (SDS).
Unit	NZDF administrative or military unit.
Work Supervisor	A person managing one or more worker teams.
Worker Team	A basic unit of workers responsible for performing a task.
Worksite Management Team	The person or persons responsible for the overall management of the worksite

1 INTRODUCTION

1.1 Defence Estate & Infrastructure Role

1. Defence Estate and Infrastructure (DEI) is the branch of NZDF responsible for NZDF's capital expenditure (CAPEX) and operational expenditure (OPEX) funding for the management, replacement, refurbishment and ongoing maintenance of the Defence Estate fixed assets, including all its buildings, services, roads, runways, wharves, fuel farms, berths, cranes, etc.

2. DEI is also responsible for ongoing facilities maintenance on NZDF's Camps and Bases through its Facilities Maintenance (FM) Providers, whose role involves a mix of construction projects, Programmed Maintenance Projects works, and scheduled and unscheduled maintenance tasks and minor new works.

3. NZDF's systematic implementation of the Health and Safety at Work Act 2015 has seen NZDF prepare Defence Force Orders and Defence Force Instructions and subordinate rules devoted to meeting its Health and Safety at Work Act 2015 'primary duty of care' responsibilities.

4. Clauses 5-8 of the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 encapsulates those responsibilities. To meet them DEI developed CHESS, and appointed health and safety personnel to support its operations in the camps and bases.

1.2 Purpose

5. CHESS is a rule set and process/procedure system. It exists to assist the Contractor and Facilities Maintenance (FM) Providers to develop and implement healthy and safe worksites. It does so by:

    a. Requiring the development and implementation by the Contractor (as defined in the NZDF 3910 Model Construction Contract) of the *Construction Safety Management Plan (CSMP),* the sole health and safety plan for a worksite, which all sub- and subordinate contractors must adopt to operate on that worksite;
    b. Requiring the development and implementation by Facilities Maintenance (FM) providers of a *Facility Maintenance Safety Management Plan (FMSMP)* for each camp or base*,* which all FM Providers subcontractors must adopt to operate on FM Provider's worksites;
    c. Establishing supervision baseline requirements for work activity on each worksite;
    d. Setting mandatory minimum worksite health safety measures;
    e. Ensuring compatibility with NZDF camp or base security processes;
    f. Setting mandatory NZDF minimum hazardous substance and dangerous goods safety and management requirements;
    g. Establishing reporting processes and systems;
    h. Establishing worksite monitoring, inspection, auditing and incident investigation processes; and
    i. Allowing DEI Management to promote and ensure continual improvement in the Health and Safety practices of DEI engaged contractors.

1.3 Health and Safety Responsibilities on NZDF Worksites

6. CHESS applies to Contractors and FM Providers.

7. Sub- and subordinate contractors working for Contractors/FM Providers must adopt those respective plans and ensure their health and safety processes and procedures comply with those plans.

8. To avoid uncertainty, everyone working on a DEI/FM Provider worksite is either:

    a. Implementing and ensuring compliance with the CSMP or FMSMP; or
    b. Has adopted and is complying with the CSMP or FMSMP.

1.4 Processes, Procedures and Templates

9. CHESS provides a number of processes, procedures, checklists and templates for forms referred to in the specifications. These include:

    a. Permit to work;
    b. Job Safety Analysis;

c. Specification Amendment (SPA) Requests; and
d. Inspection and Evaluation Checklists.

10. Read CHESS Processes, Procedures and Templates (CHESS Volume 2) for more information.

1.5 Environmental Matters

11. All environmental risk management and environmental regulatory compliance matters fall outside CHESS' scope and are managed by DEI Environmental Services. CHESS does not address Contractor/FM Provider compliance with environmental regulations or existing resource consents for NZDF sites, but does offer guidance to assist with managing human health and safety in the workplace.

12. Where environmental matters overlaps occur with health and safety during construction projects, PMP works and maintenance tasks, DEI Health and Safety will engage with DEI Environmental Services.

1.6 JARS

13. The Contractor/FM Provider may access all contractor/FM Provider forms and templates through the Join Assurance and Recording System (JARS) https://jars.nz/chess.html. The link is provided in the RFT and the contract. Access to DEI systems such as the Incident Management System requires DEI supplied access which the Project Manager or the Contractor/FM Provider receives from the DEI Health and Safety Team upon request. All contractors must be registered in JARS.

1.7 References

14. CHESS incorporates health and safety in the workplace legislation, regulations, and legislative and other instruments, including the:

a. Health and Safety at Work Act 2015
b. Health and Safety at Work (General Risk and Workplace Management) Regulations 2016;
c. *Building Act 2004*
d. NZ Building Code;
e. Building and construction related New Zealand and Australian/New Zealand standards;
f. WorkSafe New Zealand, Occupational Safety and Health Service, and Ministry of Business, Innovation, and Employment approved codes of practice, guidelines, fact sheets, and other advisory and guidance documents.

2 CAPEX PROJECT PRELIMINARIES

INTRODUCTION

15. *CAPEX Project Preliminaries* covers project activities and outputs common to project start-up , and the Contractor must ensure those activities and outputs occur prior to work commencement .

16. A key output in CAPEX *Project Preliminaries* is the preparation of a Construction Management Safety Plan (CSMP) that:

    a. Identifies relevant hazards,
    b. Determines the associated risks;
    c. Selects relevant risk control measures; and
    d. Establishes worksite management processes and systems which ensure compliance with the selected risk control measures.

17. The CSMP results from a hazard identification (HAZID) analysis occurring before works begin, which identifies hazards applicable to the site, construction methodologies, plant and equipment and other camp or base activities (Including other worksites) which singly or collectively create risks requiring management.

18. The Contractor must prepare a HAZID Analysis Register that supports the identification, management and application of worksite hazards, risks and controls.

19. The Contractor may also become involved in camp or base-level management of hazards and risks associated with multiple worksites on the same camp or base, and two approaches are included in CAPEX *Project Preliminaries* to cover those situations.

20. The *CSML Score* sets the frequencies for DEI project and worksite inspections.

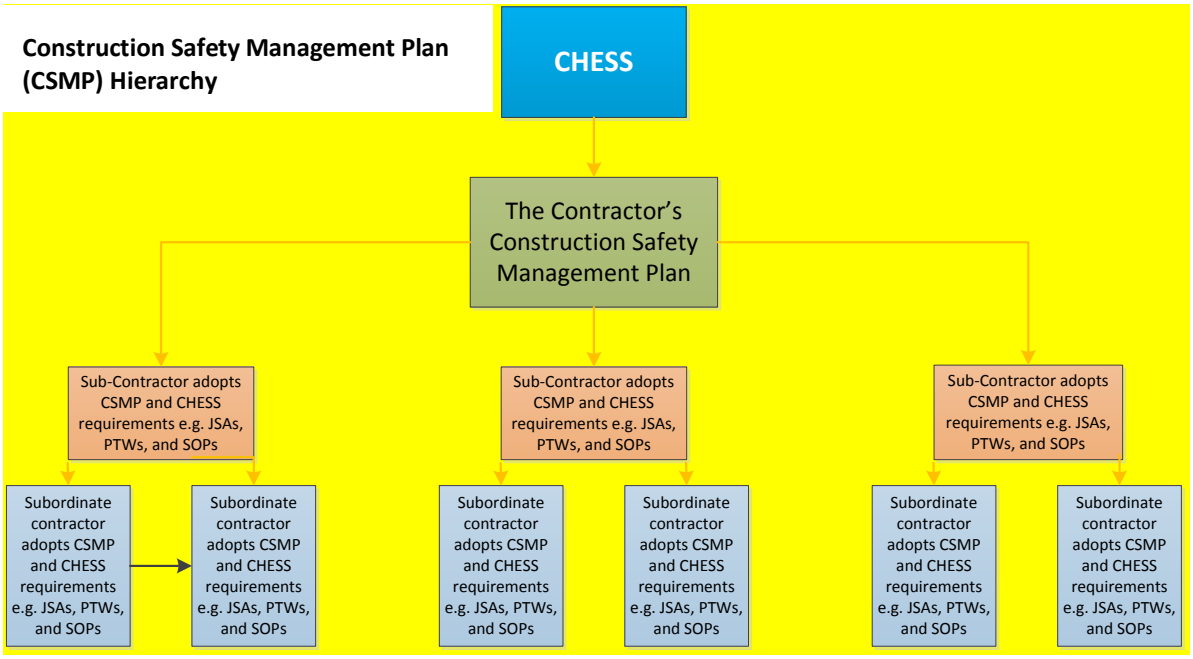
21. The CSMP sets the frequencies of the Contractor's inspections of the worksite, communications systems, traffic management systems and vehicles and plant/equipment registers and any other systems, assets, or activities relevant to health and safety on the worksite.

22. Finally, the Contractor may request changes to CHESS specifications.

2.1 Construction Safety Management Plan (CSMP)

POLICY

24. A primary CHESS output for the Contractor is preparing the CSMP. The CSMP differs from the Site-Specific Safety Plans (*SSSP*) prevalent in the NZ construction sector by imposing a single top-down safety plan rather than relying for worksite health and safety on a conglomeration of potentially conflicting *SSSPs* created by the Contractor and sub-contractors and subordinate contractors.

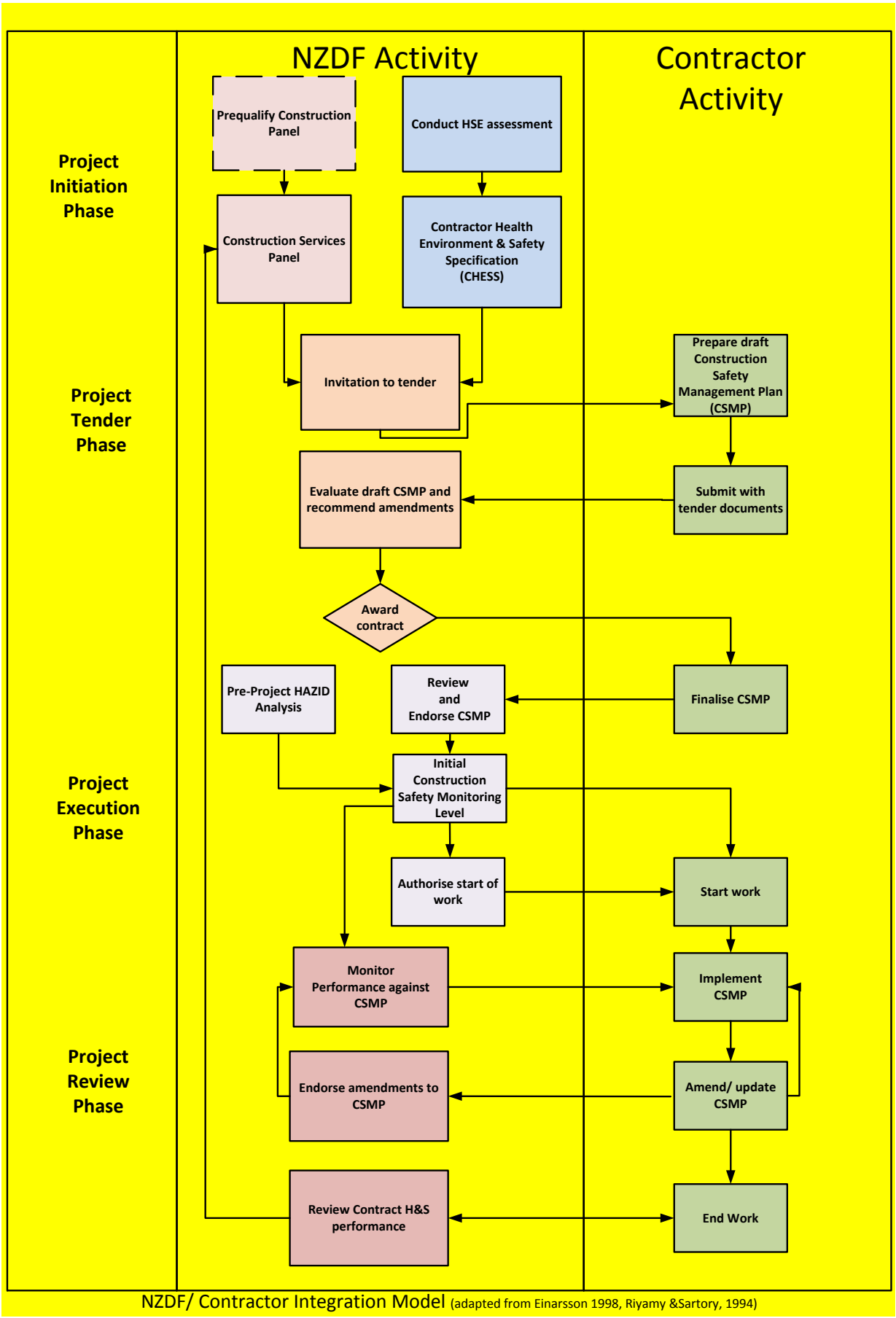


25. The CSMP derives from hazards and risks identified in the HAZID analysis and set out in the HAZID Analysis Register, outputs from the building and/or infrastructure design process and the construction processes the Contractor plans to use in delivering the project.

26. A key element of the CSMP is setting the frequency of a range of health and safety variables, such as inspections, audits and reporting during construction stages.

27. Sub-and subordinate contractors must prepare their Job Safety Analyses (JSA), applications for Permits to Work (PTW), and Standard/Safe Operating Procedures for all worksite within the framework and limits imposed by the *CSMP*, subject to the approval and supervision of the Contractor during the course of those tasks.

28. DEI will assess the draft *CSMP* and notify the Contractor of any issues and recommend suitable amendments. Once the recommended changes have occurred, or an acceptable resolution of identified issues has occurred, DEI will accept the *CSMP*.



NZDF/ Contractor Integration Model (adapted from Einarsson 1998, Riyamy &Sartory, 1994)

Figure 1 - NZDF Contractor/FM Provider Health and Safety Performance Model

SPECIFICATIONS

CSMP Preparation

29. The Contractor must finalise the *CSMP* after the contract award using:

a. CHESS;
b. The Construction Safety Management Plan template;
c. The construction contract;
d. The construction process required to deliver the project;
e. The HAZID analysis;
f. The HAZID Analysis Register;
g. Building/infrastructure design plans and other outputs provided by DEI;
h. Advice from the Contract Administrator (Engineer to Contract)
i. All other relevant information such as environmental considerations, site inspections, quantity surveys, and
j. Any other activities required of the Contractor to develop it.

30. The *CSMP* must include:

a. The main contractor's and H&S Advisor's contact details;
b. The person or persons controlling the worksite/s and their position in their project's organisational chart;
c. A clear description of the project's purpose and scope, each stage's activities, and the activities of each sub- and subordinate contractor working in each project stage;
d. The Contractor's health and safety policy;
e. The roles and responsibilities of key project staff, including the project manager, site manager, site supervisor, the project's health and safety manager/advisor and the site workers.
f. A Hazard/Risk register identifying the actual and potential hazards affecting the project, the site workers and persons in the vicinity of the worksite;
g. The numbers and names of first-aid trained personnel;
h. A current Training and Competency Register;
i. The Contractor's subcontractor management protocols;
j. Identification and management of the project's Notifiable Works;
k. The Contractor's communication methods and processes relevant to health and safety management on the worksite;
l. Safety induction processes and procedures for workers, sub- and subordinate contractors and worksite visitors;
m. Management of hazardous substances and dangerous goods required for the project;
n. Vehicle, plant and machinery management artefacts, processes and procedures;
o. Permit to Work processes and procedures and their alignment and compliance with CHESS requirements;
p. A register of Standard Operating Procedures;
q. Camp or base specific hazards, risks and control measures;
r. Worksite and worker safety rules;
s. Sub- and subordinate contractor management processes and procedures;
t. Worker health and safety and wellbeing amenities, activities and measures, including drug and alcohol management measures;
u. Accident and incident reporting processes and procedures and compliance with CHESS requirements;
v. Worker rehabilitation policy;
w. Measures to comply with the NZDF Code of Conduct and Op Respect; and
x. A Worksite/s Emergency Response Plan covering potential emergencies.

31. When preparing the CSMP the Contractor must also consider:

a. Communication processes with DEI representatives and/or camp or base command;
b. Construction stage hazard analyses, and hazard elimination and mitigation processes;

c. Environmental controls, precautions and considerations;
d. Incident and investigation procedures;
e. Safety equipment and protective clothing, related training for use, and the measures taken to enforce use of the required equipment and clothing;
f. Site security;
g. Project/Site smoking areas, for approval by Camp/Base Command; and
h. Traffic management.

Periodic Reviews

32. The Contractor must review the *CSMP* at the end of each construction stage or at least every six months over the life of the project. The Contractor may also review the CSMP in the aftermath of Lost Time Injuries, Notifiable Injuries and fatalities.

33. The Contractor must:

a. The hazards and risks of the next construction stage, or the next six months;
b. Take into account the lessons learned over the previous construction stage or the previous six months when revising the *CSMP*;
c. Take into account the results of investigations resulting from near misses, injuries requiring medical attention, Lost Time Injuries, Notifiable Injuries and fatalities during the previous construction stage or previous six months;
d. Changes or activities occurring on the camp or base over the same period that impact on the project's health and safety components; and
e. Inputs from any Simultaneous Operations (SIMOPS) activities.

AUDIT/INSPECTION

34. The Contractor must regularly inspect the worksite to ensure that the *CSMP* requirements are being met by sub- and subordinate contractors and their workers.

35. The DEI Regional Health and Safety Specialist or other DEI officials will regularly spot-inspect the worksite to measure compliance with the *CSMP* and regularly audit the Contractor's inspection processes.

REPORTING

36. The Contractor must make the results of internal inspections available to DEI on request.

TEMPLATES

Construction Safety Management Plan (CSMP*)*

REFERENCES

A guide to developing safety management systems, WorkSafe New Zealand, September 2017

2.2 HAZID Analysis/HAZID Analysis Register

POLICY

37. DEI requires the Contractor engaged for all primary construction (and Planned Maintenance Projects (PMP) occurring under a CSMP) to undertake a HAZID Analysis on all activities before contract commencement.

38. Hazard Identification (HAZID) is a qualitative technique for the early identification of potential hazards affecting or present on a site. After the tender award the Contractor must conducts a HAZID Analysis in conjunction with relevant stakeholders such as the Contract Administrator (Engineer to Contract), or relevant DEI officials to:

    a. Determine what actual and potential project hazards exist;
    b. Identify any risks resulting from those project hazards;
    c. Identify appropriate hazard and risk elimination and mitigation measures; and
    d. All other matters relevant to the project.

39. To assist with the HAZID analysis, DEI provides the Contractor with a camp or base Hazard Register detailing known risks on the camp or base to assist with the HAZID analysis process and the plans and other outputs generated during the project's design stage.

40. From the HAZID Analysis the Contractor creates the HAZID Analysis Register. It identifies:

    a. All hazards, so far as is reasonably practical, affecting the work site;
    b. All risks, so far as is reasonably practical, derived from those hazards; and
    c. All risk control measures, so far as is reasonably practical, to manage those risks.

41. The Contractor will maintain and manage the HAZID Analysis Register to reflect the changing project hazards and risks through the construction stages.

SPECIFICATIONS

HAZID Analysis

42. The HAZID analysis must identify:

    a. Project hazards arising from:
        (1) Existing site structures;
        (2) Site ground disturbance and environmental conditions such as uneven topography or wind exposure;
        (3) On-site and nearby surface and sub-surface services and utilities and facilities, including ascertaining whether asbestos is present;
        (4) Minimum applicable distance requirements (as per NZECP 34:2001) between the proposed structures and existing electricity conductors, and the safe distances between existing structures and proposed overhead power conductors via engineering studies as required and through consultation with the owner of the overhead power lines;
        (5) Site access obstacles and other hazards such as narrow winding roads or poor drainage;
        (6) Buried hazardous waste and unexploded ordnance, contaminated soil and the area's history;
        (7) Hazards and risks generated during proposed construction and maintenance methods;
        (8) Hazardous atmosphere zones;
        (9) Secure areas (high security);
        (10) Opportunities for environmental contamination or degradation resulting from air and water discharges or waste disposal[1]; and
        (11) NZDF base/site activities.

[1] Environmental hazards and risks form part of the HAZID process (capturing all of the potential hazards and risks). Environmental risks are managed by Environmental Services through Environmental Management Plans.

b. The effects or consequences of the project hazards; and

c. The risks they impose on the project.

43. Once the project hazards are identified, the HAZID Analysis must:

a. Test the identified project hazards and risks through scenarios and simulations, including worst case scenarios using a 'what if, therefore' approach;

b. Identify project hazard elimination and mitigation strategies and precautions suitable for the identified hazards;

c. Run a cost/benefit analysis on the proposed project hazard mitigation strategies and precautions;

d. Have clearly assigned responsibilities for implementing, monitoring, and review of the effectiveness of mitigation controls and processes;

e. Conduct those project hazard and risk elimination and mitigation activities that are practicable; and

f. Timetable the project hazard and risk elimination and mitigation activities; and at the conclusion of any hazard and risk elimination and mitigation activities feed the remaining hazard and risk information into the:

(1) HAZID Analysis Register for management during the construction process; and the

(2) CSML Score for the project's stages.

44. The Project's HAZID Analysis must also identify likely collective hazards and hazard management solutions. Collective hazards may include such things as worksite dust affecting air movements, or camp or base traffic movements affecting worksite deliveries, and so on.

DEI Construction Risk Matrix

45. The Contractor must apply the DEI Construction Risk Matrix when assessing ways to eliminate or minimise hazards giving rise to risks, including:

a. Substituting (wholly or partly) each hazard giving rise to the risk with something that gives rise to a lesser hazard and risk e.g. using prefabricated structural components;

b. Isolating the hazard giving rise to the risk to prevent any person coming into contact with it e.g. using a cabinet for abrasive blasting;

c. Implementing engineering controls e.g. ventilation to remove fumes;

d. Minimising residual risks by:

(1) Implementing administrative controls such as minimising exposure to noise; and

(2) Ensuring the provision and training in the use of suitable personal protective equipment, such as helmet visors.

Managing the Register

46. The Contractor must manage the HAZID Analysis Register over the project's life using the template below and the DEI Document Control System.

47. The Contractor must:

a. Ensure the HAZID Analysis Register forms part of the worksite induction and is available to all workers; and

b. Notify changes to the HAZID Analysis Register to sub- and subordinate contractors and workers.

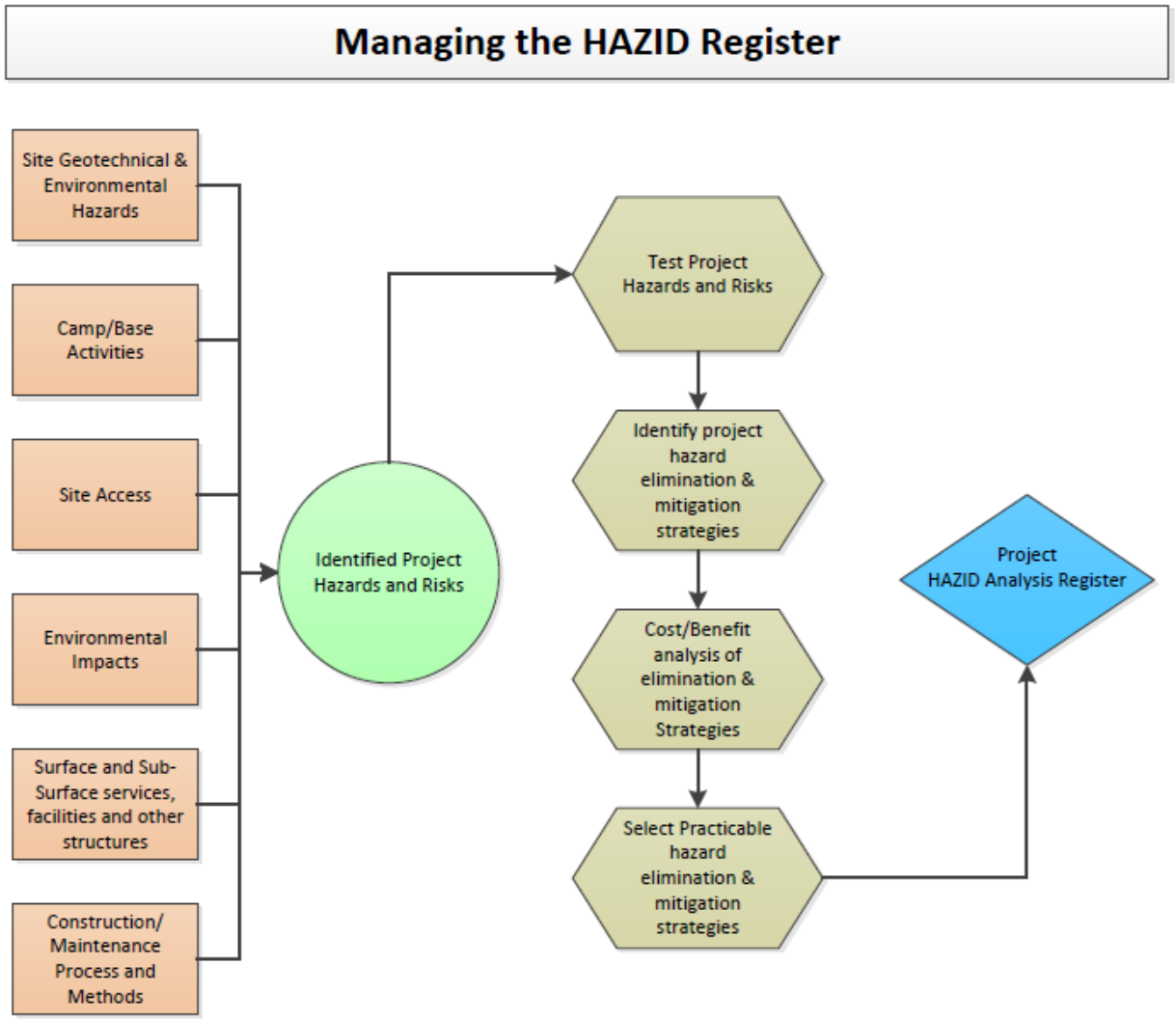


Figure 2 - Managing the HAZID Register

AUDIT/INSPECTION

48. The Contractor must inspect worksite operations to ensure compliance with the HAZID Analysis Register.

49. DEI officials will spot inspect the HAZID Analysis Register on a regular basis to ensure it accurately records known worksite and camp or base hazards and risks and highlights the hazards and associated risks to Register users.

REPORTING

50. The Contractor must make the HAZID Analysis Register available to DEI on request.

TEMPLATE

HAZID Analysis Register

REFERENCES

Hazard Identification Studies (HAZID), Germanischer Lloyd, May 2008*How to manage work risks*, WorkSafe New Zealand, July 2019
Identifying, assessing and managing work risks, WorkSafe New Zealand, July 2017

DEI Construction Hazard Risk Matrix

(e.g. Risk rating VERY HIGH (3,5), where '3,5' indicates impact level 3 (Major) and likelihood level 5 (Almost Certain)).

		IMPACT →			
	Environment	Temporary damage contained within Defence Estate; short-term, local detrimental effect.	Localised damage with some impact on external environment; serious detrimental effect that requires remedial action.	Extensive or serious damage to the environment; long term detrimental effect requires immediate remedial action.	Extensive, irreversible damage to the environment; extensive long term detrimental impact.
	People/ Health & Safety	First aid injury. Minimal lost time. Temporary partial disability. No long term effects.	Medical attention required. Short term lost time. Permanent partial disability. Medium to long term effects.	Fatality. Serious injury/illness/mental harm. Long term lost time. Permanent total disability. Long term effects.	Multiple fatalities. Multiple instances of serious physical or mental incapacity or ill health. Multiple cases of long term lost time. Multiple permanent total disability. Long term effects.
		Minor	Moderate	Major	Extreme	
Likelihood ↑	Could be expected to occur in most circumstances.	Almost Certain	MEDIUM (1,5)	HIGH (2,5)	VERY HIGH (3,5)	VERY HIGH (4,5)	5
	Could probably occur in most circumstances.	Likely	LOW (1,4)	HIGH (2,4)	VERY HIGH (3,4)	VERY HIGH (4,4)	4
	Could occur at some time.	Possible	LOW (1,3)	MEDIUM (2,3)	HIGH (3,3)	VERY HIGH (4,3)	3
	Could occur at some time, but is improbable.	Unlikely	LOW (1,2)	MEDIUM (2,2)	MEDIUM (3,2)	HIGH (4,2)	2
	Could occur in exceptional circumstances.	Rare	LOW (1,1)	LOW (2,1)	MEDIUM (3,1)	HIGH (4,1)	1
			1	2	3	4	

Figure 3- DEI Construction Hazard Risk Matrix

RISK LEVEL DESCRIPTIONS

VERY HIGH	HIGH	MEDIUM	LOW
Intolerable. Further treatment required as matter of priority. Action required: Develop treatment strategies or introduce appropriate controls, with the objective of reducing the risk to a lower level. Activities with a residual risk level of *VERY HIGH* **m**ust not proceed. Review at least monthly or if a significant change occurs.	**Generally Intolerable.** Further treatment required to be identified as matter of priority. Action required: Develop treatment strategies or introduce appropriate controls, with the objective of reducing the risk to a lower level. Activities with a residual risk level of High requires consultation and collaboration with relevant parties on the camp or base through a forum such as SIMOPS and approval of the designated Site Manager.	**Generally Tolerable.** Further treatment may be required where practicable. Action required: Develop treatment strategies or introduce appropriate controls, with the objective of reducing the risk to a lower level. Activities with a residual risk level of Medium or higher requires approval from the Site Health and Safety Adviser before work can commence on the task.	**Tolerable.** Unlikely to require further treatment. Action Required: The risk may be able to be managed by routine procedures. Minimal resource allocation or management effort required. In most cases these risks need no special precautions or actions, other than periodic monitoring of controls to ensure that the level of the risk has not changed.

Figure 4 - Risk Level Description

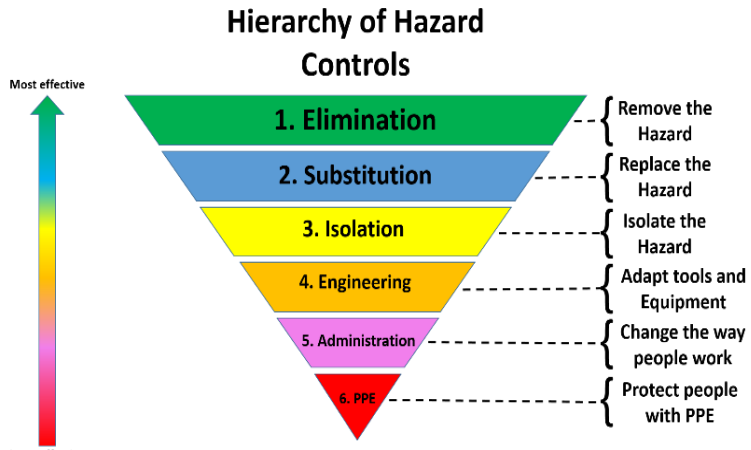


Figure 5 - Hierarchy of Hazard Controls

HAZARD CATEGORY REFERENCE TABLE

Table 2. Hazard Category Reference Table - pg.1

Potential Top Event Examples						
Exposure to (resulting in Inhalation / Ingestion / Skin Contact)	**Over stresses / Over-exertion / Poor Technique**	**Contact With / Loss of containment / Exposure to**	**Loss of Containment / Loss of control**	**Contact With**	**Loss of grip / Structural Failure / Loss of Balance**	**Contact With / Loss of Integrity / Structural Failure**
Biological	**Biomechanical**	**Chemical**	**Ecological**	**Electrical**	**Gravity**	**Mechanical**
Airborne fibres/ particulates e.g. Asbestos Bacteria Blood Bourne Pathogens Contaminated Soil Contaminated Water Fungi/mould Hygiene concerns Insect/ Animal bites or stings Vapours/ Dust/ Fumes/ Exhausts Viruses Water immersion	Body position, uncomfortable position Eye strain Muscular overexertion/ manual handling Repetitive operations Working Posture	Chemical transfer activities Contamination dust, chemicals, sediment, effluent non segregated waste Corrosives Depleted oxygen Explosives Flammable vapours/materials Gasses (Oxygen, Carbon Monoxide/Carbon Dioxide/Hydrogen Sulphide/Ammonia) Piping/ tanks containing chemicals Potential for trapped gases (Pockets of gas) Pyrophoric materials (ignites in Oxygen) Toxic gases/carcinogens Unapproved chemical	Equipment dropped to water Soil contamination Spill/Chemical to water Windblown litter	Compressors and transformer Exposed energized systems Lighting and batteries Overhead power lines Portable electrical equipment Static Electricity Underground/ buried electrical cables Unguarded or exposed electrical equipment	Anchor point/ lifting equipment (chains/ slings/ harness) Cave In Converging/ sloping/ slippery surfaces Fall from height /climbing Inadequate/ constrained entry & exit Moving/ dropped/ falling objects Roof/ walkway/ platform/ handrails Scaffolding /Elevated Work Platform/ Roof Collapse Shifting Loads/ Materials Structural collapse (including adjacent) Suspended in harness Uneven ground/ same level fall	Equipment Failure (Brakes, lights, pumps, valves and tools) Equipment under tension e.g., springs Exposed drive belts/ conveyors Exposed Rotating Machinery/ Rollers/Screw conveyors

Table 3. Hazard Category Reference Table - pg.2

Potential Top Event Examples						
Contact With / Caught by / Exposure to	**Exposure To**	**Loss of containment/ Loss of Pressure/ Release of Stored Energy**	**Exposure to/Loss of Concentration**	**Exposure To/Contact With**	**Exposure To/Contact with**	**Exposure To**
Motion	**Noise**	**Pressure**	**Psychosocial**	**Radiation**	**Temperature**	**Vibration**
Aircraft transportation Anchoring/deck lines/ropes Congested Work Area Ejected debris/tool parts Equipment/Crane Overloading Excavation Equipment Foreign body in eye Line of fire & Pinch points – Hands/fingers/feet/legs Line of fire -Body position -Shifting and swinging loads Marine vessel transportation Moving Vehicles/ Plant Road conditions Vehicle/Plant turnover Water ingress	Equipment noise e.g. grinding, chipping, engines High-pressure release Impact noise Sirens and alarms	Cylinders/Tanks/Vessels Exposed piping Hoses Pneumatic/ Hydraulic Underground piping	Aggression, violence Bullying, harassment Heavy workload Human factors (Fatigue, lapses in focus) Lone worker Low resource/ inadequate skills Monotonous tasks Poor communications Stress Unpleasant tasks	Ionising - X-Ray (Sources) Ionising- Lasers Ionising- Radon Non-ionising - Radio frequency and microwaves Non-ionising- Crack detection equipment Non-ionising- Lasers Non-ionising- Power Lines Non-ionising- Radiant heat Non-ionising- UV e.g. Sun, lighting, water treatment Non-ionising - Welding arc	Cooking and heating appliances Exposure to extreme weather conditions (wind, rain, fog) Flammable/Combustible material (including vegetation) Friction (Ignition Source) Hot/ Cold Surfaces Ignition Sources (Process/Tools/Vehicles) Steam Thermal discomfort	Whole body vibration Hand/arm vibration

3 FACILTIES MAINTENANCE PROVIDER PROJECTS/TASKS PRELIMINARIES

INTRODUCTION

51. Facilities Maintenance (FM) Providers manage a range of works on NZDF Camps and Bases. FM Provider work encompasses:

    a. FM construction projects;
    b. Planned Maintenance Project (PMP);
    c. Scheduled and unscheduled maintenance work;
    d. Minor new works; and
    e. Support for NZDF projects.

52. A key element of FM Provider management of capital projects, PMP works, and maintenance tasks is the Facilities Maintenance Safety Management Plan (FMSMP) which manages FM Provider worksites on the camp or base.

53. The FMSMP:

    a. Identifies FM Provider worksite hazards;
    b. Determines their associated risks;
    c. Selects relevant risk control measures; and
    d. Establishes worksite management processes and systems which ensure compliance with the selected risk control measures.

54. Designed for the day-to-day maintenance activities the camp or base requires, FM Providers prepare appendices for individual construction projects, PMP works and maintenance tasks whose needs fall outside the scope of the FMSMP's normal protocols. Those appendices explain how those construction projects, PMP works and maintenance tasks individual hazards and risks are managed through the application of specific control measures, such as using existing or modified Standard Operating Procedures.

55. A hazard and risk analysis precedes the establishment of the FMSMP, and the development of appendices (as noted above) for individual construction projects, PMP works, and maintenance tasks. It identifies the hazards and associated risks applicable to the camp or base and individual worksites, construction and task methods, plant and equipment and other camp or base activities (Including other worksites) which singly or collectively generate hazards and risks requiring management.

56. The FMSMP also sets the frequencies of worksite inspections, communications systems, traffic management systems and vehicles and plant/equipment registers and any other systems, assets, or activities relevant to health and safety on the worksite.

57. Finally, the FM Provider may request changes to FMSMP specifications through Specification Amendment Requests.

3.1 Facilities Maintenance Safety Management Plan (FMSMP)

POLICY

58. NZDF bears the same 'primary duty of care' responsibilities for FM work as it does for directly contracted construction projects and requires its FM Providers to apply CHESS to their camp or base construction projects, PMP works and maintenance tasks.

59. Doing so ensures that FM Providers and CAPEX Contractors apply common hazard and risk assessment, management, and control systems, and ensure FM Provider workers, and sub- and subordinate contractor workers enjoy the same level of protection as NZDF CAPEX Contractor, sub- and subordinate contractor workers. To achieve this, FM Providers must prepare Facilities Maintenance Safety Management Plans (FMSMP) for each camp and base managed.

60. Like CSMPs, FMSMPs are ongoing overarching safety plans relying on combinations of applying CHESS health and safety requirements through JSAs and Standard Operating Procedures to support individual construction projects PMP works, and maintenance tasks .

61. For complex construction projects, the FM Provider may choose to prepare an appendix to the FSMP that duplicates those elements of a CSMP not already covered by the FMSMP.

62. To avoid doubt, unless otherwise noted, health and safety measures required of CAPEX Contractors in CHESS apply equally to FM Providers.

63. After the annual FMSMP review and update by the FM Provider, DEI will review the revised FMSMP and notify the FM Provider of any issues and suggested amendments. Once any issues are resolved to the satisfaction of both parties, DEI will approve the FMSMP.

SPECIFICATIONS

64. The *FMSMP* must include:

a. FM health and safety goals and the means by which the FM Provider intends to achieve them;
b. How the FM provider will achieve its CHESS responsibilities, and obligations;
c. Employer/employee consultation processes set out in the Health and Safety at Work Act and the Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016;
d. Hazard and risk analysis methods and outputs;
e. The processes for creating and maintaining the FM Risk Register;
f. Its approach to applying CHESS requirements for managing dangerous goods, hazardous substances, and waste disposal management processes;
g. Its application of CHESS hazard and risk control measures for construction projects, PMP works and maintenance tasks;
h. Descriptions of Standard Operating Procedures and other hazard and risk control measures applicable to construction projects, PMP works and maintenance tasks;
i. Emergency preparedness and response plans for FM Provider worksites, including reflecting essential content from the camp or base health and safety plan;
j. How the FM Provider will manage contractors to ensure CHESS health and safety objectives are met;
k. How sub- and subordinate contractors will conform their JSAs, applications for Permits to Work and Standard Operating Procedures to CHESS requirements.
l. Incident and investigation procedures;
m. On site injury responses and an accident management plan (acknowledging, where appropriate NZDF resources as well as public health services);
n. Provision for the application of standard risk control measures for protecting other people present at the base or site from the effects of FMSMP work and activities;
o. Emergency response actions and plans;
p. Safety equipment and protective clothing, related training for use, and the measures taken to enforce use of the equipment and clothing;

q. Safety monitoring (audits and inspections) and the reporting process, along with the improvement process flowing from the safety monitoring process;
r. Safety protocols for plant and equipment used during tasks;
s. Statutory health and safety requirements relevant to the construction project, PMP works or maintenance tasks;
t. Task hazard analyses, and task hazard elimination and mitigation processes;
u. The personnel required for the scope of work and associated safety training;
v. The resources the FM provider has allocated to managing and implementing the FMSMP;
w. Management of project, works and task timelines;
x. Traffic management; and
y. Worksite security.

65. The FM Provider must review the FMSMP annually. Annual reviews must:

a. Take into account the lessons learned over the previous year and apply appropriate ones to the revised FMSMP;
b. Take into account the results of investigations resulting from near misses, injuries requiring medical attention, lost time Injuries, notifiable injuries and fatalities during the previous year;
c. The projected hazards and risks applicable over the next year;
d. Changes or activities occurring on the camp or base over the next year that impact on the project's health and safety components; and
e. Inputs from any SIMOPS activities occurring on the camp or base.

66. The FM Provider must review the relevant elements of the FMSMP in the aftermath of notifiable injuries and fatalities, potentially notifiable events, and trends of incidents and near misses.

AUDIT/INSPECTION

67. The FM Provider must regularly inspect its worksites to ensure its contractors are meeting CHESS requirements

68. The RHSS will regularly spot-inspect FM Provider worksites to measure compliance with CHESS and regularly audit the FM Provider's inspection processes.

REPORTING

69. The FM Provider must make the results of internal inspections available to DEI on request.

TEMPLATES

Facilities Maintenance Safety Management Plan

REFERENCES

A guide to developing safety management systems, WorkSafe New Zealand, September 2017

3.2 Hazard and Risk Analysis and FM Risk Register

POLICY

70. DEI requires all contractors engaged for FM Provider construction projects, PMP works and maintenance tasks undertake hazard and risk analyses on all tasks before the work commences and record the risks in the FM Risk Register and their specific control measures in Standard Operating Procedures.

71. The FM Provider must consult the camp or base Hazard Register for its hazard and risk analyses and when preparing or amending its Risk Register, Job Safety Analyses, and Standard Operating Procedures.

72. The FM Provider's hazard and risk analyses for individual construction projects, PMP works and maintenance tasks must occur in conjunction with relevant stakeholders such as DEI officials and camp and base authorities to:

    a. Identify what actual and potential construction project, PMP, or maintenance task hazards and associated risks;
    b. Identify appropriate hazard and risk control measures; and
    c. All other matters relevant to the construction project, PMP works or maintenance task.

73. The FM Risk Register identifies:

    a. All hazards, so far as is reasonably practical, affecting FM Provider work sites;
    b. All risks, so far as is reasonably practical, derived from those hazards;
    c. All risk control measures, so far as is reasonably practical, to manage those risks.
    d. Residual risks existing after the application of those control measures;
    e. The Standard Operating Procedures relevant to managing those residual risks; and
    f. Any specialised hazard and risk control measures relevant to camp or base hazards.

74. The FM Provider will maintain and manage the FM Risk Register and Standard Operating Procedures and individual control measures to reflect changes in FM Provider worksite hazards and risks.

75. Where the construction project requires the preparation of a CSMP, then the FM Provider will follow the CSMP preparation processes detailed in Chapter 2.

SPECIFICATIONS

Hazard and Risk Analyses

76. FM Provider hazard and risk analyses must identify:

    a. FM Provider construction project, PMP works, and maintenance task hazards arising from:
        (1) Existing site structures;
        (2) Site ground disturbance and environmental conditions such as uneven topography or wind exposure;
        (3) On-site and nearby surface and sub-surface services and utilities and facilities, including ascertaining whether asbestos is present;
        (4) Minimum applicable distance requirements (as per NZECP 34:2001) between the proposed structures and existing electricity conductors, and the safe distances between existing structures and proposed overhead power conductors via engineering studies as required and through consultation with the owner of the overhead power lines;
        (5) Site access obstacles and other hazards such as narrow winding roads or poor drainage;
        (6) Buried hazardous waste and unexploded ordnance, contaminated soil and the history of the area;
        (7) Hazards and risks generated during proposed construction and maintenance methods;
        (8) Hazardous atmosphere zones;
        (9) Secure areas (high security);

(10) Opportunities for environmental contamination or degradation resulting from air and water discharges or waste disposal[2]; and

(11) NZDF base/site activities.

b. The effects or consequences of the identified hazards; and

c. The degree of risk they impose on workers engaged for FM Provider construction projects, PMP works and maintenance tasks.

77. Once a FM construction project, PMP works, and maintenance task hazards are identified, the FM Provider must:

a. Test the hazards and risks through scenarios and simulations, including worst case scenarios using a 'what if, therefore' approach, and record the results;

b. Identify suitable hazards and risks elimination and mitigation strategies, precautions and control measures;

c. Perform a cost/benefit analysis on the proposed identified hazard and risk mitigation strategies, precautions and control measures;

d. Have clearly assigned responsibilities for implementing, monitoring, and review of the effectiveness of mitigation controls and processes;

e. Apply the hazard and risk elimination and mitigation strategies, precautions and control measures that are practicable; and

f. Amend the FMSMP, individual hazard and risk control measures and Standard Operating Procedures to reflect residual hazard and risk information.

78. The FMSMP and FM Risk Register must also identify potential collective hazards and hazard management solutions. Collective hazards may such things as worksite dust affecting air movements, or camp or base traffic movements affecting worksite deliveries, and so on.

DEI Facilities Maintenance Risk Matrix

79. The FM Provider must apply the FM Provider Construction Risk Matrix when assessing ways to eliminate or minimise hazards giving rise to risks, including:

a. Substituting (wholly or partly) each hazard giving rise to the risk with something that gives rise to a lesser hazard and risk e.g. using prefabricated structural components;

b. Isolating the hazard giving rise to the risk to prevent any person coming into contact with it e.g. using a cabinet for abrasive blasting;

c. Implementing engineering controls e.g. ventilation to remove fumes;

d. Minimising residual risks by:

(1) Implementing administrative controls such as minimising exposure to noise; and

(2) Ensuring the provision and training in the use of suitable personal protective equipment, such as helmet visors.

Managing the Register

80. The FM Provider must manage the FM Risk Register and Standard Operating Procedures over the FM construction project, PMP, and routine maintenance task life using the template below and the DEI Document Control System.

81. The FM Provider must:

a. Make the FM Risk Register part of the worksite induction and is available to all workers; and

b. Notify changes to the Risk Register to sub- and subordinate contractors and workers.

[2] Environmental hazards and risks form part of the HAZID process (capturing all of the potential hazards and risks). Environmental risks are managed by Environmental Services through Environmental Management Plans.

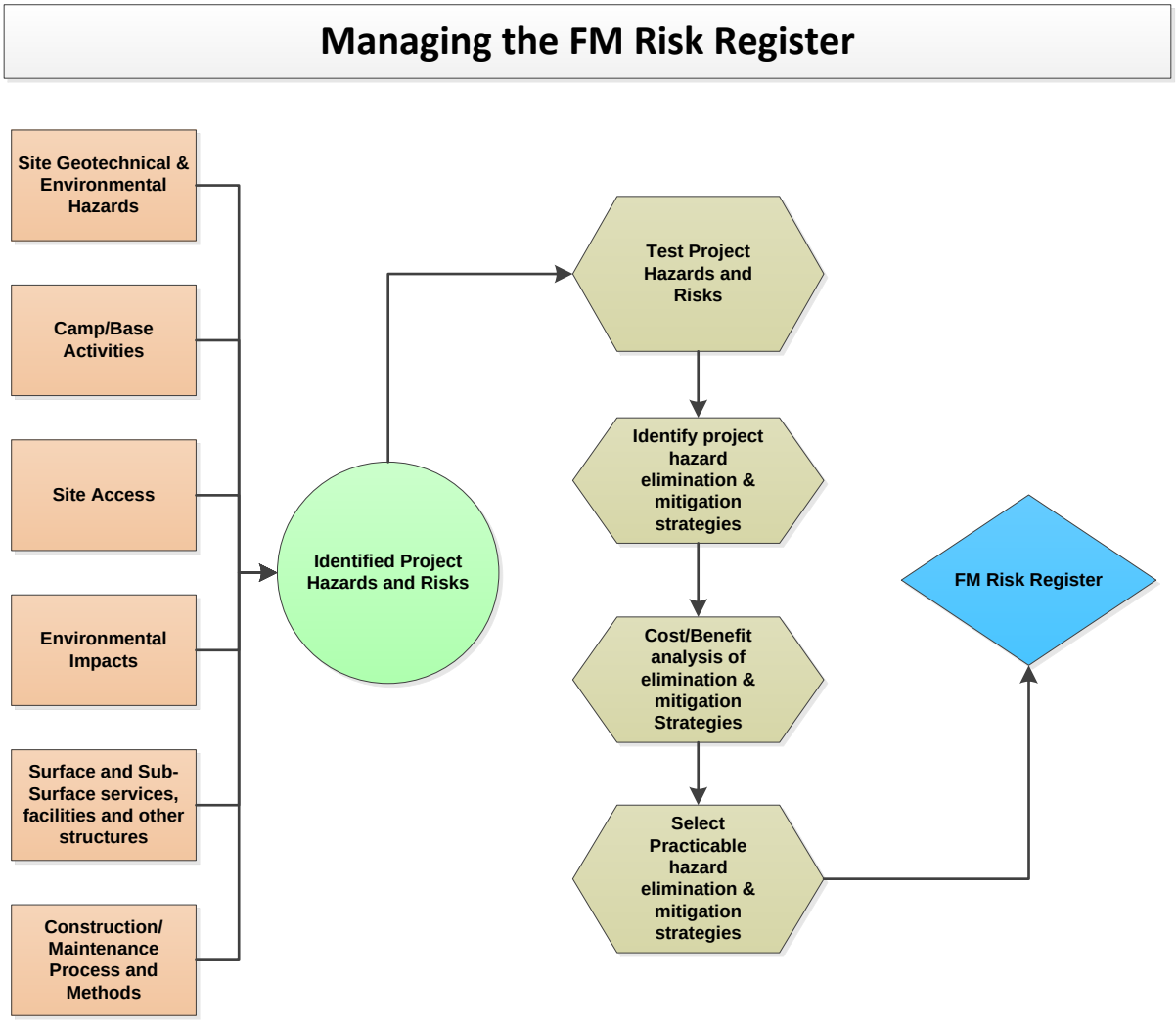


Figure 7 - Managing the FM Risk Register

AUDIT/INSPECTION

82. The FM Provider must inspect worksite operations to ensure compliance with the FM Risk Register.

83. DEI officials will spot inspect the FM Risk Register on a regular basis to ensure it accurately records known hazards and risks on the worksite and the camp or base; and effectively notifies users of the hazards and associated risks.

REPORTING

84. The FM Provider must make the FM Risk Register available to DEI officials on request.

TEMPLATE

FM Risk Register

REFERENCES

Hazard Identification Studies (HAZID), Germanischer Lloyd, May 2008
How to manage work risks, WorkSafe New Zealand, July 2017
Identifying, assessing and managing work risks, WorkSafe New Zealand, July 2017

FM Provider Construction Risk Matrix

(e.g. Risk rating VERY HIGH (3,5), where '3,5' indicates impact level 3 (Major) and likelihood level 5 (Almost Certain)).

		IMPACT →			
	Environment	Temporary damage contained within Defence Estate; short-term, local detrimental effect.	Localised damage with some impact on external environment; serious detrimental effect that requires remedial action.	Extensive or serious damage to the environment; long term detrimental effect requires immediate remedial action.	Extensive, irreversible damage to the environment; extensive long term detrimental impact.
	People/Health & Safety	First aid injury. Minimal lost time. Temporary partial disability. No long term effects.	Medical attention required. Short term lost time. Permanent partial disability. Medium to long term effects.	Fatality. Serious injury/illness/mental harm. Long term lost time. Permanent total disability. Long term effects.	Multiple fatalities. Multiple instances of serious physical or mental incapacity or ill health. Multiple cases of long term lost time. Multiple permanent total disability. Long term effects.
		Minor	Moderate	Major	Extreme	
Likelihood ↑	Could be expected to occur in most circumstances.	Almost Certain	MEDIUM (1,5)	HIGH (2,5)	VERY HIGH (3,5)	VERY HIGH (4,5)	5
	Could probably occur in most circumstances.	Likely	LOW (1,4)	HIGH (2,4)	VERY HIGH (3,4)	VERY HIGH (4,4)	4
	Could occur at some time.	Possible	LOW (1,3)	MEDIUM (2,3)	HIGH (3,3)	VERY HIGH (4,3)	3
	Could occur at some time, but is improbable.	Unlikely	LOW (1,2)	MEDIUM (2,2)	MEDIUM (3,2)	HIGH (4,2)	2
	Could occur in exceptional circumstances.	Rare	LOW (1,1)	LOW (2,1)	MEDIUM (3,1)	HIGH (4,1)	1
			1	2	3	4	

Figure 8 - FM Construction Risk Matrix

FM Residual Risk Management

VERY HIGH	HIGH	MEDIUM	LOW
Intolerable. Further treatment required as matter of priority. Action required: Develop treatment strategies or introduce appropriate controls, with the objective of reducing the risk to a lower level. Activities with a residual risk level of *VERY HIGH* **m**ust not proceed. Review at least monthly or if a significant change occurs.	**Generally Intolerable.** Further treatment required to be identified as matter of priority. Action required: Develop treatment strategies or introduce appropriate controls, with the objective of reducing the risk to a lower level. Activities with a residual risk level of High requires consultation and collaboration with relevant parties on the camp or base through a forum such as SIMOPS and approval of the designated Site Manager.	**Generally Tolerable.** Further treatment may be required where practicable. Action required: Develop treatment strategies or introduce appropriate controls, with the objective of reducing the risk to a lower level. Activities with a residual risk level of ***Medium*** or higher requires approval from the Site Health and Safety Adviser before work can commence on the task.	**Tolerable**. Unlikely to require further treatment. Action Required: The risk may be able to be managed by routine procedures. Minimal resource allocation or management effort required. In most cases these risks need no special precautions or actions, other than periodic monitoring of controls to ensure that the level of the risk has not changed.

Figure 9 - FM Residual Risk Management

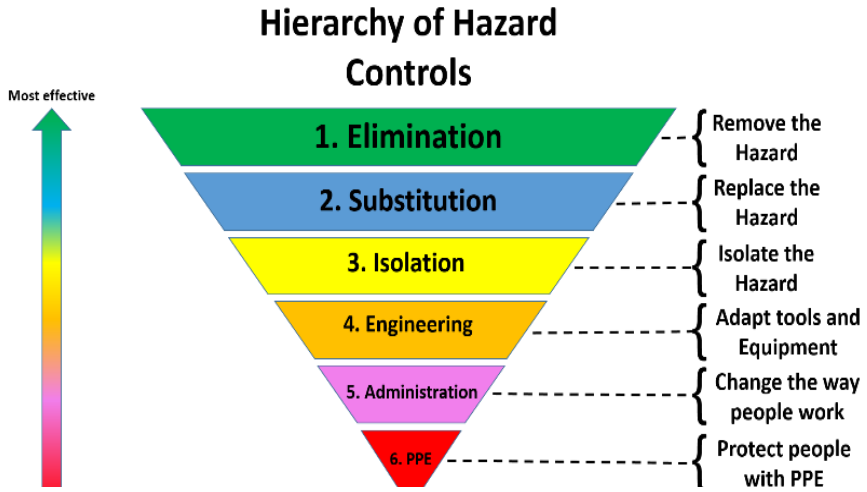


Figure 10 - FM Hierarchy of Hazard Controls

Table 4. Hazard Category Reference Table - pg.1

Potential Top Event Examples						
Exposure to (resulting in Inhalation / Ingestion / Skin Contact)	**Over stresses / Over-exertion / Poor Technique**	**Contact With / Loss of containment / Exposure to**	**Loss of Containment / Loss of control**	**Contact With**	**Loss of grip / Structural Failure / Loss of Balance**	**Contact With / Loss of Integrity / Structural Failure**
Biological	**Biomechanical**	**Chemical**	**Ecological**	**Electrical**	**Gravity**	**Mechanical**
Airborne fibres/particulates e.g. Asbestos Bacteria Blood Bourne Pathogens Contaminated Soil Contaminated Water Fungi/mould Hygiene concerns Insect/Animal bites or stings Vapours/Dust/Fumes/ Exhausts Viruses Water immersion	Body position, uncomfortable position Eye strain Muscular overexertion/ manual handling Repetitive operations Working Posture	Chemical transfer activities Contamination dust, chemicals, sediment, effluent non segregated waste Corrosives Depleted oxygen Explosives Flammable vapours/materials Gasses (Oxygen, Carbon Monoxide/Carbon Dioxide/Hydrogen Sulphide/Ammonia) Piping/ tanks containing chemicals Potential for trapped gases (Pockets of gas) Pyrophoric materials (ignites in Oxygen) Toxic gases/carcinogens Unapproved chemical	Equipment dropped to water Soil contamination Spill/ Chemical to water Windblown litter	Compressors and transformer Exposed energized systems Lighting and batteries Overhead power lines Portable electrical equipment Static Electricity Underground/ buried electrical cables Unguarded or exposed electrical equipment	Anchor point/ lifting equipment (chains/slings/ harness) Cave In Converging/sloping/ slippery surfaces Fall from height/climbing Inadequate/ constrained entry & exit Moving/ dropped/ falling objects Roof/ walkway/platform/ handrails Scaffolding /Elevated Work Platform/ Roof Collapse Shifting Loads/ Materials Structural collapse (including adjacent) Suspended in harness Uneven ground/ same level fall	Equipment Failure (Brakes, lights, pumps, valves and tools) Equipment under tension e.g., springs Exposed drive belts/ conveyors Exposed Rotating Machinery/ Rollers/Screw conveyors

Table 5. Hazard Category Reference Table - pg.2

Potential Top Event Examples						
Contact With / Caught by / Exposure to	**Exposure To**	**Loss of containment / Loss of Pressure / Release of Stored Energy**	**Exposure to / Loss of Concentration**	**Exposure To / Contact With**	**Exposure To / Contact with**	**Exposure To**
Motion	**Noise**	**Pressure**	**Psychosocial**	**Radiation**	**Temperature**	**Vibration**
Aircraft transportation Anchoring/deck lines/ropes Congested Work Area Ejected debris/tool parts Equipment/Crane Overloading Excavation Equipment Foreign body in eye Line of fire & Pinch points - Hands/ fingers/ feet/ legs Line of fire -Body position -Shifting and swinging loads Marine vessel transportation Moving Vehicles/Plant Road conditions Vehicle/Plant turnover Water ingress	Equipment noise e.g. grinding, chipping, engines High-pressure release Impact noise Sirens and alarms	Cylinders/Tanks/Vessels Exposed piping Hoses Pneumatic/Hydraulic Underground piping	Aggression, violence Bullying, harassment Heavy workload Human factors (Fatigue, lapses in focus) Lone worker Low resource/ inadequate skills Monotonous tasks Poor communications Stress Unpleasant tasks	Ionising - X-Ray (Sources) Ionising- Lasers Ionising- Radon Non-ionising - Radio frequency and microwaves Non-ionising- Crack detection equipment Non-ionising- Lasers Non-ionising- Power Lines Non-ionising- Radiant heat Non-ionising- UV e.g. Sun, lighting, water treatment Non-ionising - Welding arc	Cooking and heating appliances Exposure to extreme weather conditions (wind, rain, fog) Flammable/ Combustible material (including vegetation) Friction (Ignition Source) Hot/ Cold Surfaces Ignition Sources (Process/Tools/Vehicles) Steam Thermal discomfort	Whole body vibration Hand/arm vibration

4 RUNNING THE CONSTRUCTION PROJECT, PMP WORKS, OR MAINTENANCE TASKS

INTRODUCTION

85. NZDF requires CAPEX Contractors and FM Providers to apply the same rules for managing health and safety on their worksites, with Contractors and FM Providers aligning their CSMPs and FMSMPs.

86. CAPEX Contractors and FM Providers are required to comply with all environmental regulatory requirements. These requirements must be discussed with DEI Environmental Services to ensure compliance.

4.1 Construction Safety Monitoring Level Score

POLICY

87. Each construction project, PMP works and maintenance task must have a Construction Safety Monitoring Level Score (CSMLS) value prepared at the commencement of work, and at each subsequent stage, depending on the nature of the project, works or task using the process and tables below.

88. Factors influencing the level of safety monitoring FM Provider construction projects, PMP works, and maintenance tasks need are:

    a. The project status;
    b. The complexity of the construction works; and
    c. The consequence of non-compliance (derived from the HAZID Analysis).

89. Four levels of construction monitoring are defined. The decision as to which level is appropriate will be project dependent.

90. This approach does not replace a Contractor/FM Provider's obligation to monitor its own works or to change its inspection regimes as the worksite changes over the course of the project.

91. CSMLS milestones must be agreed prior to the commencement of the project, and must reflect the changing complexity and associated hazards and risks of each of the construction project, PMP works, or maintenance task phases.

SPECIFICATIONS

92. The Contractor/FM Provider in conjunction with the RHSS and DEI PM, and where appropriate the **Contract Administrator (Engineer to the Contract)** and other experts as required, must develop a CSMLS for:

    a. Each phase of a construction project, PMP works, or maintenance task; or
    b. The entire project PMP works, or maintenance task where it encompasses the equivalent of a single construction project phase.

Table 6 – CSMLS Value Generation Table

Criteria	Assessment (CSMLS Values)				Selected CSMLS Values
Project Status	Small 1	Medium 2	Large 3	Major 4	
Complexity of Work Procedures/ Site	Routine 2	Difficult 4	Complex 6		
Relevant experience of constructors	Inexperienced contractors 6	Experienced contractor/s 2	Certified to ISO45001 contractors 1		
Consequences of non-compliance	Minor 1	Moderate 4	Serious 6	Critical 12	
CSML Score					

Table 7 – CSMLS Value and Worksite Monitoring Requirement Table

CSMLS Value	CSMLS Level	CSMLS Frequency	Minimum Review Level Examples
5-6	**CSML1**	**As required**	Review relevant safe methods of work, HAZID Analysis Register, FM Risk Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE
7-8	**CSML2**	**As required**	Review relevant safe methods of work, HAZID Analysis Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE.
9-10	**CSML3**	**Fortnightly**	Review relevant safe methods of work, CSMP/FMSMP, HAZID Analysis Register, FM Risk Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE, Emergency Response Plans, worksite communications, worker training records.
11-12	**CSML4**	**Fortnightly**	Review relevant safe methods of work, CSMP/FMSMP, HAZID Analysis Register, FM Risk Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE, Emergency Response Plans, worksite communications, Prestart records, worker training records.
13-14	**CSML5**	**Weekly**	Review relevant safe methods of work, CSMP/FMSMP, HAZID Analysis Register, FM Risk Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE, Traffic Management Plans, Emergency Response Plans, worksite communications, Prestart records, worker training records, equipment/plant/vehicle compliance and certification.
15-16	**CSML6**	**Weekly**	Review relevant safe methods of work, CSMP/FMSMP, HAZID Analysis Register, FM Risk Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE, Traffic Management Plans, Emergency Response Plans, worksite communications, Prestart records, worker training records, equipment/plant/vehicle compliance and certification.
17+	**CSML7**	**Must be negotiated**	Review relevant safe methods of work, CSMP/FMSMP, HAZID Analysis Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE, Traffic Management Plans, Emergency Response Plans, worksite communications, Prestart records, worker training records, equipment/plant/vehicle compliance and certification, WorkSafe New Zealand Notifications, SimOps coordination, Specification Amendment Requests, Just Culture Evidence.

EXAMPLES

Table 8 - Example One: Sandblast Booth

Criteria	Assessment (CSMLS Values)				Selected CSML Values
Project Status	Small 1	Medium 2	Large 3	Major 4	2
Complexity of Work Procedures/ Site	Routine 2	Difficult 4	Complex 6		2

Relevant experience of constructor – Average CHIPS scores	Inexperienced contractors 6	Experienced contractor/s 2	Certified to ISO45001 contractors 1		2
Consequences of non-compliance	Minor 1	Moderate 4	Serious 6	Critical 12	4
CSML Value					10

Table 9 - CSMLS Value and DEI Monitoring - Example One Result

CSMLS Value	CSMLS Level	CSMLS Frequency	Minimum Review Level
9-10	CSML3	Fortnightly	Review relevant safe methods of work, CSMP/FMSMP, HAZID Analysis Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work Compliance, worker PPE, Emergency Response Plans, Worksite communications, worker training records.

Table 10 - Example Two: Roofing Replacement

Criteria	Assessment (CSMLS Values)				Selected CSMLS Values
Project Status	Small 1	Medium 2	Large 3	Major 4	2
Complexity of Work Procedures/ Site	Routine 2	Difficult 4	Complex 6		4
Relevant experience of constructor – Average CHIPS scores	Inexperienced contractors 6	Experienced contractor/s 2	Certified to ISO45001 contractors 1		2
Consequences of non-compliance	Minor 1	Moderate 4	Serious 6	Critical 12	6
CSML Value					14

Table 11 - CSMLS Value and DEI Monitoring - Example Two Result

CSMLS Value	CSMLS Level	CSMLS Frequency	Minimum Review Level
13-14	CSML5	Weekly	Review relevant safe methods of work, CSMP/FMSMP, HAZID Analysis Register, Job Safety Analysis, induction records, site housekeeping, chemical management, barricading, Permit to Work compliance, worker PPE, Traffic Management Plans, Emergency Response Plans, worksite communications, Prestart records, worker training records, equipment/plant/vehicle compliance and certification.

AUDIT/INSPECTION

93. DEI will conduct spot-inspections and audits in accordance with the CSMLS whenever possible.

REPORTING

94. The Contractor/FM Provider must make the results of inspections available to DEI on request.

REFERENCES

Construction Monitoring Services, Engineering New Zealand,
Evaluating Construction Project Complexity, Christian Brockmann, Bremen University of Applied Sciences, Germany, Kalle Kähkönen, Tampere University of Technology, Finland

4.2 Job Safety Analysis

POLICY

What is a Job Safety Analysis?

95. Under the *Health and Safety at Work Act 2015*, risk assessment of individual hazards is essential for effective hazard management. Understanding and performing risk assessment and implementing appropriate risk control measures is vital to both protecting workers and business.

96. A Job Safety Analysis (JSA) is a procedure that helps integrate accepted health and safety principles and practices into a specific task or job. In a JSA a task is broken down into its basic steps, and potential hazards and their risks and related risk control measures are identified for each step.

97. DEI's Job Safety Analysis system incorporates best practice methodologies including 'top event' analysis, the NZDF Risk Matrix, and hierarchy of Control Levels analysis in order to ensure a quality and consistent approach to safety analysis across NZDF construction sites.

98. In addition to supplying information for a *Permit to Work* application, a JSA is useful in:

    a. Correcting unsafe conditions and processes;
    b. Training; and
    c. Accident investigation.

99. A properly completed JSA should be used when conducting a pre-start talk prior to commencing the task, ensuring:

    a. All members of the work team are aware of the risks and control measures required to perform the task safely;
    b. Roles and responsibilities for implementing controls are assigned and understood;
    c. The scope of the task has not changed; and
    d. No additional hazards have been introduced.

SPECIFICATIONS

When is a JSA Required?

100. A DEI JSA is required for all activities described in the DEI Permit to Work Process (see *CHESS Processes, Volume 2, Procedures and Templates* for JSA instructions*)*. This includes:

    a. All works defined as Permitable Work Tasks in CHESS;
    b. All notifiable works as defined in *Regulation 2 - Interpretation of the Health and Safety in Employment Regulations 1995*;
    c. All works requiring a PCBU to manage risks as specified in *Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 – Part 2 – Management of particular risks*; and
    d. All works involving asbestos requiring a Permit to Work for non-asbestos related activity such as removing asbestos while also working at height or in confined spaces. Works involving asbestos work that does not involve other permitable activities does not require a JSA. In those circumstances the Asbestos Removal Control Plan replaces the need for a JSA.
    e. Any tasks that are not part of a current Standard Operating Procedure (SOP) and have a 'Medium', 'High' or 'Very High' risk assessment prior to implementing controls (according to the DEI Construction/FM Construction Hazard Risk Matrix).

101. The Contractor/FM Provider must prepare a JSA in collaboration and consultation with the workers performing the task.

102. All workers involved in the task must sign the DEI JSA to indicate they were involved in the JSA process and to acknowledge they understand the hazards, risks, and controls inherent in the task.

103. Activities with a residual risk level of Medium or higher require approval from the Worksite/FM Provider Health and Safety Adviser before work can commence on the task. This acknowledges they have read the JSA and are satisfied that all reasonable controls have been specified.

104. Activities with a residual risk level of High requires consultation and collaboration with relevant parties on the camp or base through a forum such as SIMOPS. Contractor/FM Provider Managers must sign the DEI templated JSA when the Residual Risk is determined to be 'high' or higher, to acknowledge they have read the JSA and are satisfied that all reasonable controls have been specified.

AUDIT/INSPECTION

105. The Contractor/FM Provider must regularly, as reasonably practical, inspect the worksite to ensure compliance with Job Safety Analysis requirements and specifications.

106. DEI will regularly spot-inspect the operation and worker compliance of Job Safety Analysis requirements and specifications.

REPORTING

TEMPLATE

Job Safety Analysis Form

PROCESSES AND PROCEDURES

DEI Job Safety Analysis Process Map
JSA-A: DEI Job Safety Analysis Procedure

REFERENCES

https://worksafe.govt.nz/dmsdocument/452-task-analysis-worksheet
https://www.waikato.ac.nz/__data/assets/pdf_file/0004/435541/Job-Safety-Analysis-Worksheet.pdf

4.3 Permit to Work Process

POLICY

What is a Permit to Work?

107. A Permit to Work (PTW) system is a written permission designed to manage potentially hazardous work and reduce the opportunity for human error. The system constitutes a clear and standardised approach to identifying tasks, assessing risks, setting task duration and assigning supplemental or simultaneous activity and control measures.

108. DEI requires the Contractor/FM Provider to use the DEI Permit to Work system in order to ensure DEI has adequate visibility and control over *permited* works that may affect the ongoing construction, operations and other activities on camps and bases.

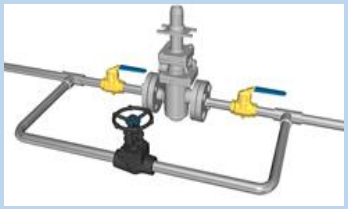
109. No Contractor/FM Provider or NZDF staff member can issue a permit to themselves. This is because the main objective of a PTW is to independently identify, manage and verify the safety controls for a task.

DEFINITIONS

110. The table below provides definitions for some of the types of work that are included as permitable work:

Table 12. Permitable Work Types

Work Type	Description
Asbestos	Any work risking or involving asbestos disturbance . ***Note:*** *An approved Asbestos Removal Control Plan (ARCP) can take the place of a JSA for the Asbestos Permit.* 
Compressed Gas	Where there is a requirement to charge or refill a cylinder(s) or conduct a repair to cylinder(s) on site. Cylinders are defined as: refillable compressed gas containers designed to carry gas at pressures above normal atmospheric pressure used for storing and transporting compressed gases, includes cryogenic liquids.  ***Note:*** *This does not include fire extinguishers or aerosol dispensers. Permits will not be required where gas can be isolated such as for heat pump works, or works on infinity hot water systems.*
Confined space *(AS/NZS 2865:2009)*	Any activity occurring in 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 • May have controlled means of entry and exit (as defined in *WorkSafe: Confined spaces; planning entry and working safely in a confined space.)* This includes: - Manhole risers or tank sumps 

	- All underground and above ground tanks and vessels - Excavations >/= 1.5 metres - Storm water management systems, and - Any water or waste-handling systems large enough for human entry ***Note:*** *Crawl spaces beneath buildings and roof voids are controlled access only. Valid risk assessments must be in place with rescue plans.*
Control Bypass	Involves overriding or disabling a safety-critical device and/or system, including alarms and warning lights, or leaving a site operating with a disabled safety-critical device and/or system. ***Note:*** *Routine compliance testing and monitoring can be performed under a SOP.* 
Diving	Any work involving the complete submersion of a worker in a liquid. 
Electrical	Modifications and/or alterations to energised conductors within switchboards: • All work on electrical lines and equipment where the line is energised • All work on electrical lines and equipment designed to carry voltages of 1000V or more • All works encroaching Minimum Approach Distances (MAD) • Like for like component exchanges  ***Note:*** *Does not include energising equipment and/or circuits for testing. Refer to local provider to confirm MAD.*
Explosives	Any work involving the use, movement or disturbance of explosive substances. 
Gas Lines	Installing connections or repairs on 'Live' gas lines and equipment (Hot Tapping) for either pipeline or storage tank work. Used when a gas network or line cannot be isolated. 

Ground Disturbance	Defined as any work requiring ground penetration of any depth, with any device, such as: • Cutting the ground • Conducting ground sampling or testing (not including firing range backsplash areas) • Ground works to expose services or utilities • Any trench excavation • Recovering a resource e.g. ground drilling  ***Note:*** *Nonpermit tasks include: like for like replacements such as replacing fence posts in existing holes or routine gardening tasks within the existing garden beds. Replacement items must not exceed the current dimensions.* *Backfilling excavations or reopening those backfills is not a permitable task.* This requirement is to ensure all legacy pipe, gas, cable and water infrastructure is identified prior to work commencing. NZDF has a history of services and other hazards not being detected before work commences, and all ground works must follow a scan, check, verify (by potholing or similar) approach.
Hazardous Substances	The use or handling of acutely toxic (class 6.1A and 6.1B) substances, fumigants and vertebrate toxic agents or substances that require a certified handler or filler according to WorkSafe New Zealand rules and the *Health and Safety at Work (Hazardous Substances) regulations 2017*. This includes work involving the clean up or removal of hazardous substances or remediation work which may create hazardous dusts or vapours, such as lead based contaminates, or paint. 
Hot Work *(AS/NZS 4781:1973)*	Defined as any work where the temperatures generated are likely to ignite surrounding materials, e.g. cutting and welding, metal grinding, blow lamps and other equipment producing sparks, heat or a naked flame. This includes: • Blow-torches • Flame cutting • Any work involving an open flame  ***Note:*** *The following are not permitted activities unless a risk assessment defines them as HIGH risk tasks:* • *Asphalt work* • *Sparking form jack hammers or concrete saws, drilling* • *Use of portable electric heaters* • *Operation of internal combustion engines* • *Vinyl iron and Vinyl welding works*
Lifting	Work using any lifting appliance where the appliance has to lift a mass of **500 kilograms** or more **AND** a **vertical distance of five metres** or more. The requirement excludes excavators and forklifts.  Permited lifts include: • Crane lifts involving more than one crane • Lifts over operating facilities posing a risk to workers, public or property • Lifts within minimum approach distance (MAD) over or adjacent to power lines • Lifting of any personnel via an approved lifting method

	• Lifts near the maximum rated loads of the lifting equipment • Other lifts classified as HIGH RISK as determined from a risk assessment, e.g. Notice to Airmen (NOTAM)
Other	Any other activities rated as high risk or above, according to the JSA risk assessment.
Penetrating Structure	Any penetration of an existing building, structure or wall that requires: • Penetration through a passive fire system (fire walls, fire doors or fire barriers) • Penetration through insulated sandwich panels and/or any wall constructed of two metal faces bonded to a fully insulating core of polystyrene (or other flammable synthetic product) • Alterations that create an opening of any size that makes **a void through** that building, structure, wall, floor, etc. This is to ensure unseen hazards such as asbestos, gas or electrical cables are identified prior to work being performed.  ***Note:*** *Minor alteration work (e.g. moving a power point) or additions (e.g. fitting a shelf to a wall)* ***MAY*** *be done under a SOP*
Pipe works	Work on 'Live' reticulated water mains or petroleum networks. Used when the relevant network or line cannot be isolated during the repair or new works. 
Tree Felling	Any felling of trees that are 200mm at the stump, or posing a risk of "hang-up" post fell. *Note: Some pruning activities may require a permit if they are considered to be HIGH RISK work due to the size or location of the branches.* Refer to Ground Disturbance requirements for tasks involving stump grinding. 
Work at Height	Any work performed at a height exceeding 1.8 metres when measured from the lowest point of the workers body (i.e. fall distance of 1.8 metres+), including tower and/or mobile scaffolding and erecting/dismantling scaffolding. *Note:* 1. *No Permit is required where work is undertaken from properly erected and certified scaffold structures, scissor lifts or boom lifts that meet the regulatory requirements and have fall protection permanently engineered into the plant/equipment.;* 2. *Does not include additions to the scaffolding that do not require re-certification that can be added from the existing work platform (e.g. closing a gap between a structure and the existing certified scaffold).* 

SPECIFICATIONS

What Work Needs a *Permit to Work*?

111. Any work requiring a *Permit to Work* is '*permitable*'.

112. As defined in the Health and Safety in Employment Regulations 1995 and this document, permitable work (including restricted and notifiable work), and any work involving asbestos requires a *Permit to Work* where that work involves permitable activities not covered by the NZDF Asbestos Team approved Asbestos Removal Control Plan.

113. Restricted and notifiable works specified in regulations also require notification to WorkSafe New Zealand.

114. DOCs or authorised DEI officials, or FMPIs issue *Permits to Work* on permitable tasks, i.e. the high risk actions that NZDF requires a *Permit to Work* for, with the emphasis that the *Permit to Work* is issued for the permitable task, not the lower-risk activities (that do not themselves require a *Permit to Work)* associated with achieving the permitable task.

115. The Permit to Work system does not incorporate environmental regulatory compliance matters. All contractors must consult DEI Environmental Services for the compliance requirements for environmental risk management.

When is a DEI *Permit to Work* Required?

116. A DEI *Permit to Work* is required in two situations. They are:

    a. The DOC or authorised DEI official, or FMPI generates a DEI *Permit to Work* as part of a project needing *permitable work* done; and

    b. The Contractor/DFM Provider identifies the need for *permitable work* in the course of their work, and applies for a DEI *Permit to Work* from the DOC or authorised DEI official, or FMPI, at least 24 hours prior to the time the permit is required, except in extraordinary circumstances.

117. A Contractor/FM Provider must not undertake any *permitable work* on the Defence Estate without a DEI *Permit to Work* issued by a DOC, authorised DEI official, or FMPI.

Who Issues a Permit to Work

118. Permits to Work are issued by authorised officials listed in Arc GIS, including Defence Officers of Compliance (DOC), other authorised DEI officials, or FMPIs .

Role of the DOC or Authorised DEI Official or FMPI

119. Before a Contractor begins any permitable work on the Defence Estate, the Contractor must have a DEI Permit to Work issued by a DOC or authorised DEI official, or FMPI.

120. DEI also authorises its officials, typically EDDs, PMs and POs and FM Provider FMPI's to issue Permits to Work.

121. FMPIs are nominated representatives of the camp or base FM Provider which DEI has authorised to evaluate, consult on and issue DEI *Permits to Work* for FM Provider construction projects, PMP works and maintenance tasks on the camp or base.

122. All DOCs, authorised DEI officials and FMPIs must have successfully completed Permit to Work – Issuer (NZQA Unit Standard 17590) and Permit to Work – Receiver (NZQA Unit Standard 17588) (both must be renewed on expiry) prior to commencing DEI Permit to Work operations and:

    a. Meet NZDF Permit Assurance (PTW D) requirements, and

    b. Ensure all DEI Permit to Work processes are met.

123. Prior to a DEI *Permit to Work* being issued, the DOC, authorised DEI official or FMPI must:

    a. Visually inspect the task site location;

b. Identify other tasks occurring in the area which may impact on, or be impacted on the work the requested permit encompasses, and use that information to determine when the task may occur, and what risk management processes and hazard mitigation measures are required;
c. Review the required task work process and necessary equipment (in conjunction with the persons assigned to the task where needed);
d. Inspect relevant data sources and records to properly identify potential hazards;
e. Ensure persons assigned to undertake the task are fully aware of those potential hazards;
f. Set out the precautions and hazard control measures required for the specific task;
g. Ascertain the necessary precautions, such as isolations or a traffic management plan and process, have occurred and are in place before work commences;
h. Ascertain that the person or persons undertaking the task have the requisite NZDF and base and worksite inductions, training, skills and experience before issuing the Permit;
i. Ensure the person or persons undertaking the task understand the communication processes required to successfully complete the task and how to meet the requirements of the *Permit to Work* process;
j. Approve the task/site specific emergency response plan;
k. Adjust the *Project Management Plan/Project Safety Management Plan* applicable to the permitable work to reflect the work;
l. Notify the permitable work to all relevant parties, and the precautions and hazard control measures required and occurring during the course of the permitable task; and
m. Record the issue of the permit in the approved manner (Permit to Work Register), and give the persons assigned to undertake the task a physical or electronic copy of the permit.

Role of *Receiver*

124. The *Receiver* (applicant) must have completed *Permit to Work – Receiver (NZQA Unit Standard 17588)* prior to commencing permitable operations.

125. The *Receiver* must:

a. Specify the type of work;
b. Notify WorkSafe New Zealand of *Notifiable Work;*
c. Describe the task being performed;
d. Identify potential impacts on site or base activities;
e. Identify hazards associated with the task;
f. Describe controls to mitigate risks;
g. Identify and ensure PPE required for the task is supplied; and
h. Define traffic or emergency response requirements.

126. The *Receiver* must be present when the *permited* task occurs, either directly participating or actively supervising it, and doing so in a manner which ensures the hazards are monitored and the risk control measures are effectively implemented.

127. The *Receiver* may receive multiple concurrent *Permits to Work* for a worksite provided the Receiver is able to effectively ensure the relevant hazards are managed and the risk control measures are effectively implemented. In such circumstances, the DOC or authorised DEI official, or FMPI must ensure that the safe management of multiple concurrent *Permits* is possible and necessary for the project.

Displaying Hard and Soft Copies of Permits to Work

128. The DOC or authorised DEI official, or FMPI issues, records, and stores electronic and hard copies (as required) of each live, suspended and completed issued DEI *Permit to Work*.

129. The Contractor/FM Provider must display hard copies or links to each live *Permit to Work*, and related notifications/certificates and any other documentation required at the worksite during the execution of the work. In the event of lost or damaged worksite documents, the DOC or authorised DEI official, or FMPI must provide new copies.

130. DEI maintains a readily accessible visual display of the overall worksite showing the locations of *permitable work*, the types of work and the status of each *Permit to Work* in Arc GIS.

Period of *Permit to Work* Validity and *Permit to Work* Revalidation

131. *Permits to Work* are valid for one work shift or allocated time. Where tasks last longer, the *Permit to Work* is suspended at the end of the shift and the DOC or authorised DEI official, or FMPI may reissue (revalidate) a *Permit to Work* at the beginning of each subsequent work shift until the task is completed or the maximum number of revalidations is reached. Depending on worksite circumstances, the DOC or authorised DEI official, or FMPI may withhold the *Permit to Work* for specific shifts where the other activities on the worksite affect the permitable work's location

132. During the work shift *permitable work* may stop for a range of reasons, including:

    a. During a worksite emergency;
    b. If a stop work occurs;
    c. The Contractor's designated work supervisor becoming unavailable;
    d. If the task scope or conditions change substantially or in a way that would impact on the works to be carried out. e.g. weather, parts availability;
    e. If a condition of the *Permit to Work* cannot be complied with; and
    f. If ordered by the DOC or authorised DEI official, or FMPI, or requested by the Contractor for any reason.

133. At the end of shifts, or for any other relevant reason, the Permit Receiver returns the *Permits to Work* to the DOC or authorised DEI official, or FMPI, and updates the DOC or authorised DEI official, or FMPI is updated on the status of the *permitable work*. The Permit Receiver is responsible for ensuring the worksite is in a secure, tidy and safe condition at the end of each shift, or during any other stoppage.

134. After each such stoppage, the Contractor/FM Provider's designated Permit Receiver must sign out the *Permit to Work* from the DOC or authorised DEI official, or FMPI before work may resume.

135. Permits are not transferrable from one work party to another. Where a new work party arrives for the task, the permit is suspended until the new work party understands the scope of the work, the hazards, risks and controls, and all the workers in the new work party sign the JSA.

136. Where numerous permits are issued per day, or where the Contractor/FM Provider wishes to start a permitable task earlier than the DOC, authorised DEI official, or FMPI's normal working hours, the permit may be issued the previous day. During subsequent normal working hours, the DOC, authorised DEI official, or FMPI inspects the worksite.

Permit Process for After Hours, Weekends and Public Holidays

137. Permits for after hours, or extended hours, or weekend work may be issued on the previous day by the DOC, authorised DEI official, or FMPI, especially for routine or ongoing high risk activities.

138. All documentation relevant to the permitable task must be checked and approved by the DOC, authorised DEI official, or FMPI, who sets the required control measures, before the Permit Receiver may proceed with the task.

139. The Permit Receiver must ensure all the agreed and relevant control measures stipulated in the documentation are in place for the duration of the permitable task.

140. The DOC, authorised DEI official, or FMPI is not required to contact the Permit Receiver on the morning of the permit, or to 'open' the permit in ArcGIS, nor follow up at the end of the permit.

141. Once the *permitable* task is completed the Permit Receiver passes the documentation to the DOC, authorised DEI official, or FMPI, as previously arranged.

Permit to Work Suspension, Cancellation, and Revalidation

142. The DOC or authorised DEI official, or FMPI can suspend or cancel the *Permit to Work* for any reasonable safety concern.

143. When the *Permit to Work* is suspended or cancelled, the DOC or authorised DEI official, or FMPI must also amend any elements of the *permitable work* needed (depending on delegations) such as approvals or permits for other arrangements pertaining to the *Permit to Work*.

144. The DOC or authorised DEI official, or FMPI may extend the *Permit to Work* duration beyond the duration of a single work shift so long as the worksite circumstances and the worker/s condition supports that, i.e. the Contractor/FM Provider has effectively managed worker fatigue management and undertaken required risk assessment for the additional hours of work. The DOC or authorised DEI official, or FMPI must ensure the extended length *Permit to Work* task does not adversely affect, or is adversely affected by, any other *permited* tasks occurring at the same time.

145. The DOC or authorised DEI official, or FMPI may revalidate a *Permit to Work* for a maximum of five consecutive calendar days (not including Saturday and Sunday) via daily discussions with the Contractor/FM Provider. This is to ensure site conditions that change are captured and discussed.

146. Where it is expected that the *permited* work/task may run over time or longer than one shift but before the expiry of the allocated permit time, the Permit Receiver must contact the DOC or authorised DEI official, or FMPI, to request an extension by emailing a soft copy request to the DOC or authorised DEI official, or the FMPI who will suspend the *Permit to Work* (including on Arc GIS). The DOC or authorised DEI official, or FMPI can request either a photo or video of the permit location to verify that it's safe and not posing any subsequent risks.

147. The following day the Permit Receiver must verify that the site conditions remain the same as previously stated. The DOC or authorised DEI official, or FMPI will email the *Permit to Work* to the Permit Receiver and amend the 'permit amendment' section of the permit form (Section 6) and issue the *Permit to Work* in Arc GIS.

Essential Unplanned Work

148. The DOC or authorised DEI official, or FMPI may issue a *Permit to Work* for essential and unplanned work without requiring a project meeting. Applications for essential unplanned work go through the same planning and approval process as planned work and the DOC or authorised DEI official, or FMPI can only issue a *Permit to Work* after:

a. Mapping the proposed activity against all other activities on the worksite;
b. Identifying potential clashes with concurrent activities;
c. Identifying appropriate precautions and hazard mitigation measures; and
d. Notifying all relevant persons or entities of the permitable work and the precautions and hazard mitigation measures taken, as is practicable in the circumstances.

Permits to Work Affecting Multiple Sites

149. Where a *Permit to Work* affects multiple worksites, the DOC or authorised DEI official, or FMPI must identify potential clashes between the permitable work and any other work underway on the worksite or adjacent worksites, and notify the relevant officials or other persons.

Multiple *Permit to Work* Activities on the Same Worksite

150. Multiple permitable work on the same worksite is managed by the DOC or authorised DEI official, or FMPI, who is responsible for ensuring that:

a. There are no clashes between the types of work underway;
b. All potential risks are identified and worked into the CSMP/FMSMP;
c. Appropriate precautions and hazard mitigation measures are in place; and
d. All relevant persons are notified of the *permited* work and the precautions and hazard mitigation measures taken.

Remote Site Permits to Work

151. A *Permit to Work* must only be issued for a remote DEI worksite if a visit to a site is prohibited due to location, DOC or authorised DEI official, or FMPI availability and/or constraints and:

a. The DOC or authorised DEI official, or FMPI knows the site or has reliable drawings and site data;

b. The DOC or authorised DEI official, or FMPI has a detailed knowledge of the task and activities to be granted a permit;

c. A JSA has been completed for the activity and submitted to the DOC or authorised DEI official, or FMPI;

d. The Permit Receiver reviews the specific on-site conditions and confirms their understanding of the conditions and their ability to comply with the work permit requirements by signing the permit; and

e. The DOC or authorised DEI official, or FMPI has confirmed via video call or voice call that the requirements for safe work are met.

152. Face-to-face communication is important to the engagement between the DOC or authorised DEI official, or FMPI and the Permit Receiver and critical to ensuring a common understanding on the risk and controls associated with the activity. Given the importance of these face-to-face discussions**, remote permitting should be considered as a last resort for high risk activity.**

Precautions and Hazard Control Measures

153. *Permits to Work* will clearly specify the precaution and hazard control measures required for *permitable* work, including:

a. Physical and/or electrical isolation (including lock out and tag out);

b. Decontamination;

c. Precautions necessary for:

(1) Rescue plans

(2) Fire watch

(3) Lift plans

(4) Asbestos Removal Control Plans; and

(5) Confined Spaces.

d. Personal protection equipment; and

e. Any other special precautions.

154. The *Permit to Work* will assign necessary tasks relating to the precautions and hazard control measures to a specific person or persons, including signoff forms or check fields in an electronic form, signifying that the person/s designated to perform the precaution or hazard control measure have successfully undertaken them.[3]

Managing *Permitable Work* on Busy Worksite

155. The mechanism for managing *permitable* work is the *Construction Safety Management Plan (CSMP)* identifying the worksite activities requiring a *Permit to Work* during the project-planning phase, and provides a framework for timetabling permitable work to ensure clashes do not occur.

156. As work programmes seldom run to time, the second is the daily project meeting provide a means for communicating and resolving worksite conflicts. Those meetings review ongoing activities and work due

[3] In a paper-based system, this generates written notification or certificates stating that the required actions have occurred, with the persons responsible for those actions signing the form that the action has occurred. In an electronic system, the *Permit to Work* contains the list of actions required, the persons assigned and a check field in the form signifying the actions have occurred, only checkable by the person assigned.

to start over the life of the project, and identify, manage, and schedule known or potentially conflicting works.

Permit Issue Approval Process

157. In conjunction with the JSA required for the *Permitable Work*, the Contractor/FM Provider must also supply a Scope of Work/Method Statement setting out the overall worksite activity that explains the context for the JSA and the *Permit to Work* application.

158. The Contractor/FM Provider must supply a Job Safety Analysis is required for all p*ermitable work*.

159. The Permit Receiver fills out the PTW application form and then passes it to the DOC or authorised DEI official, or FMPI for review. Once any questions and concerns are resolved with the application, and the DOC or authorised DEI official, or FMPI approves the application, the DOC issues the DEI *Permit to Work*, notifying the Receiver of any conditions applying to the *Permit to Work*.

160. When the work is complete, or as advanced as is possible in the single work shift, the Permit Receiver must render the worksite safe and tidy, and return the *Permit to Work* to the DOC or authorised DEI official, or FMPI for reissue for the next work shift, or at a date/time at the DOC or authorised DEI official, or FMPI discretion.

161. Page 1 of *Permit to Work form* details the work required, and contains the:

a. Persons or entity/s responsible for performing the *permitable work*;
b. Location of the *permitable work*;
c. Description and type of *permitable* work to be performed;
d. Potential impacts of the *permitable work* on affected personnel and facilities;
e. Specialised approvals required for the *permitable work*;
f. A list of the potential hazards in and around the worksite;
g. Controls for hazard mitigation measures needed for the *permitable work*;
h. Additional PPE required to be used by workers;
i. Worker expertise and skills required for the *permitable work*;
j. Expected start and end times for the task (the validity period);
k. *Job Safety Analysis* for the *permitable work* with Emergency Response and Traffic Management plans (attached copy or link to); and
l. Persons or entity/s responsible for undertaking the precautions and hazard mitigation measures.

162. Page 2 of the *Permit to Work* form contains the administrative process for the issue of the *Permit to Work*, the inspection of the performance of the work and contains the:

a. Process for project suspension and closedown;
b. Confirmation that the Contractor has completed a Job Safety Analysis;
c. Confirmation the specified hazard mitigation controls are adequate to perform the work safely;
d. Confirmation that the Contractor has identified all required worker certifications for the task;
e. Confirmation that the Contractor has notified WorkSafe New Zealand of notifiable work;
f. Confirmation all potential hazards have been identified;
g. Confirmation the work will not conflict with camp or base operations or other permits; and the
h. Process for suspending, cancelling or closing the *Permit to Work*.

During the *Permitable* task

163. The DOC or authorised DEI official, or FMPI will attend the worksite meeting held by the Contractor or the Contractor's representative responsible for supervising the *permitable work*. The worksite meeting will explain the:

a. Nature and process of the *permitable work*;
b. The precautions and hazard mitigation measures required for the *permitable work*;

c. Local circumstances affecting the *permitable work*; and

d. Require the workers and the Contractor or representative sign or otherwise acknowledge reading the Job Safety Analysis attached to the *Permit to Work*;

164. The DOC or authorised DEI official, or FMPI will regularly inspect the work site, so far as is practicable, during the work process to ensure that:

a. The work is undertaken in the manner approved by the *Permit to Work;*

b. The appropriate precautions and hazard mitigation measures are being applied;

c. Issues such as poor working practices, where practicable, are identified and brought to the attention of the persons undertaking the work with the emphasis on immediate cessation of the poor working practices;

d. Certificates, approvals and permits issued pursuant to the DEI *Permit to Work* process are displayed at the work site; and

e. The *permitable* work is occurring in the timeframe specified. Where delays to completion occur, then the DEI *Permit to Work* Register will be amended and appropriate measures taken to ensure the safety of the site and relevant personnel and plant until the task is completed. That includes notifying all persons who need to know of the completion delay and ensuring the appropriate measures taken.

165. Should local conditions change sufficiently to interfere with the safe completion of the work, the Contractor must request a change to the *Permit to Work*. The DOC or authorised DEI official, or FMPI will review the situation and then alter the *Permit to Work,* if necessary, to reflect the condition change.

Permit Sign off, Closedown & Record Keeping

166. When the Contractor notifies the DOC or authorised DEI official, or FMPI the task is completed, the DOC or authorised DEI official, or FMPI subsequently inspects the site (within normal working hours); and reviews any necessary technical sign offs for the quality and success of the work from relevant persons and organisations.

167. If satisfied the completed *permitable work* has the required signoffs and the site is in a safe condition, the DOC or authorised DEI official, or FMPI signs off or checks the *task complete* box on the DEI *Permit to Work* electronic record and closes down the permit.

168. The DOC or authorised DEI official, or FMPI is responsible for storing in the *Permit to Work Register*, in a recoverable format, all records resulting from the permitable work, including the:

a. Completed *Permit to Work*;

b. Job Safety Analysis;

c. Approvals, certificates or other forms of technical sign offs for the work; and

d. Any other material and records generated for the permitable work.

NOTIFIABLE WORK & INCIDENTS

Notifiable Work

169. Notifiable Work is defined by WorkSafe - Health and Safety in Employment Regulations 1995 – consisting of:

a. Commercial logging or tree felling operations;

b. Construction work involving one or more of the following:

(1) Work in which a person may fall five metres or more, other than (the following exclusions):

(a) Work in connection with a residential building up to and including two full storeys;

(b) Work on overhead telecommunication lines or overhead electric power lines;

(c) Work carried out from a ladder only;

(d) Maintenance and repair work of a minor or routine nature;

(2) The **erection or dismantling or scaffolding** from which any person may fall five metres or more;

(3) Work **using a lifting appliance** where the appliance has to lift a mass of 500 kilograms of more a vertical distance of five metres or more, other than work using an excavator, a fork-lift, or a self-propelled mobile crane;

(4) Work in any **pit, shaft, trench, or other excavation** in which any person is required to work in a space more than 1.5 metres deep and having a depth greater than the horizontal width at the top;

(5) Work in any **drive, excavation, or heading** in which any person is required to work with a ground cover overhead;

(6) Work in **any excavation** in which any face has a vertical height of more than five metres and an average slope steeper than a ratio of one horizontal to two vertical;

(7) Work in which **any explosive** is used or in which any explosive is kept on site for the purpose of being used; and

(8) Work in which **any person breathes air that is compressed** or a respiratory medium other than air.

Notifiable Incidents

170. Notifiable Incident - Health and Safety at Work (Asbestos) Regulations 2016 consisting of Notifiable Incidents as defined in Regulation 6, which are:

a. Asbestos events (relating to the emergency demolition of a structure or plant containing asbestos) that trigger:

(1) **Regulation 23 – Emergency procedure: workplace** – requiring the PCBU to notify WorkSafe in the event that an emergency at a workplace (where a structure or plant is structurally unsound and the collapse of the structure of plant is imminent) requires a structure or plant with asbestos is fixed to or installed in the structure or plant needs demolition. The PCBU is also required to apply a procedure that reduces the risk to workers and persons in the vicinity of the demolition site being exposed to asbestos in concentrations exceeding the airborne contamination standard.

(2) **Regulation 24 – Emergency procedure: home** - requiring the PCBU carrying out the demolition of a home to notify WorkSafe in the event of an emergency at the home where a structure or plant must be demolished and asbestos is fixed to or installed in the structure or plant. The PCBU is also required to apply a procedure that reduces the risk to workers and persons in the vicinity of the demolition site being exposed to asbestos in concentrations exceeding the airborne contamination standard.

b. **Regulation 45 – Action if respirable asbestos fibre level too high –** requiring a licensed removalist removing Class A asbestos must notify WorkSafe if the recorded respirable asbestos fibre levels reach or exceed 0.02 fibres/millilitres and apply appropriate controls to prevent exposure and further release of respirable asbestos fibre.

AUDIT/INSPECTION

171. The Contractor/FM Provider must regularly inspect the worksite to ensure compliance with Permit to Work requirements and specifications.

172. DEI will spot-inspect the operation and worker compliance of *Permit to Work* requirements and specifications.

REPORTING

173. The DOC or authorised DEI official, or FMPI will record a summary of all permits in ArcGIS/Survey 123.

TEMPLATE

4.3 Permits Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure
PTWB-Permit to Work - Application Process Map
PTW-B: Permit to Work - Application Procedure
PTWC-Permit to Work - Application Process Map
PTW-C: Permit to Work - Application Procedure
PTWD-Permit to Work - Application Process Map
PTW-D: Permit to Work - Application Procedure

REFERENCES

Introduction to the Health and safety at Work Act 2015 – A Guide to New Zealand's Key Work Health and Safety Law and its Regulator, WorkSafe New Zealand, February 2019
General risk and workplace management – Part 2 of Guidance of the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, WorkSafe New Zealand, November 2022

4.4 Simultaneous Operations (SIMOPS) Planning and Implementation

POLICY

SIMOPS Basics

174. Simultaneous Operations (SIMOPS) is an active deconfliction process operated by the OIC Defence Area (or nominated personnel) when CAPEX, OPEX, and scheduled and unscheduled maintenance works occur across multiple worksites on the camp or base generate risks to each other and Defence Force activities.

175. The Contractor/FM Provider must support and participate in the development of Simultaneous Operations Management Processes (SIMOPS) and must participate in the SIMOPS committee meetings.

Purpose

176. SIMOPS exist to:

a. Avoiding serious activity clashes and conflicts that create accidents and incidents; and
b. Prevent accumulating delays and interruptions caused by seemingly unavoidable conflicts.

177. Examples of SIMOPS clashes can include, but are not restricted to:

a. Schedule clashes (activities in the same area at the same time);
b. Physical clashes between equipment and transport movement;
c. Failures (equipment malfunctions and breakdowns);
d. Interference from other worksite activities (e.g. material deliveries during crane operations);
e. Contracts and third party interfaces (e.g. liabilities or risk insurance);
f. Environmental impacts (such as weather incidents); and
g. Camp or base activities.

SIMOPS Management and Operation

178. Where the OIC Defence Area considers a camp or base's worksites will generate clashes and conflicts between camp or base operations and worksite tasks, then the OIC Defence Area, in conjunction with DEI and single-service safety entities, the FM Provider, and individual Contractors, will establish a SIMOPS management committee to de-conflict tasks through:

a. Scheduling;
b. Substitution;
c. Separation; and
d. Engineering controls, barricades and isolation processes.

SIMOPS Plan

179. A SIMOPS Plan contains the:

a. Schedule of the concurrent activities;
b. Detailed breakdown of concurrent activities;
c. Identified hazards and relevant risk analysis for those concurrent activities;
d. Appropriate responses (precautions and actions);
e. Responsible parties for the various concurrent activities;
f. Emergency response awareness and contacts;
g. Assessment of existing emergency response plans in light of SIMOPS operations, and where required prepare new plans;
h. Communication plan and system for the worksites;
i. Limits on how much integrity envelopes may be purposely degraded during concurrent activities and periods of escalated risk (e.g. extreme weather); and

j. Activities which cannot coincide in same location, activities which require a permit to work or other restrictions, and activities which can safely occur at the same time.

180. SIMOPS planning starts with the application of the common project timeline from the CSMP with the timeline guiding management of the SIMOPS tasks. Management of the timeline and its tasks requires the Contractor or Contractors for multiple adjacent worksites to collaborate and contribute to the overall camp/base SIMOPS plan.

SIMOPS Instructions and Directives

181. In accordance with the SIMOPS Plan and management committee decisions, the OIC Defence Area issues instructions and directives to deconflict worksite tasks and Defence Force activities, with which the recipients of those instructions and directives must comply.

182. That includes the Contract Administrator (Engineer to Contract) and/or the Project Manager for individual contracts, who are responsible for ensuring OIC Defence Area SIMOPS instructions are passed to the Contractor, who in turn, is responsible for complying with those SIMOPS instructions.

SPECIFICATIONS

183. The Contractor/FM Providers must assist the development of SIMOPS through the supply of advice on construction project, PMP works and maintenance task activities and their respective timelines to the SIMOPS planning, with particular respect to:

a. Scheduled worksite activities;
b. The worksite traffic management plan;
c. The movement and use of plant and equipment to and from and on the worksite;
d. Worker commuting and parking requirements;
e. The arrival and departure of sub- and subordinate contractors from their worksite; and
f. Any other relevant matters.

184. The Contractor/FM Provider must include in worksite operations the following outputs from SIMOPS:

a. Communication, coordination and cooperation activities between the Contractor and the sub- and subordinate contractors to ensure compliance with SIMOPS instructions or directives;
b. Notification of SIMOPS affected tasks in:
   (1) Site inductions for sub- and subordinate contractors new to the worksite;
   (2) Job safety analyses;
   (3) Hazard awareness briefings;
   (4) Permits to work issued on days affected by SIMOPS instructions or directives; and
   (5) Pre-start work meetings and toolbox talks and PPE selection.
c. Notifications to all relevant managers and supervisors of SIMOPS instructions or directives effects on task schedules and the potential task constraints and interference;
d. Setting task start times and duration;
e. Ensuring that hazard control measures, communications related training and PPE are appropriate for the SIMOPS affected tasks;
f. Ensuring emergency planning and supervisor and worker preparedness for a SIMOPS incident or accident is in place; and
g. Regularly reviewing and expectation monitoring.

AUDIT/INSPECTION

185. The Contractor/FM Provider must regularly inspect the worksite/s to ensure that SIMOPS affected activities are occurring in accordance with SIMOPS instructions or directives.

186. DEI will regularly spot-inspect the worksite to measure compliance with SIMOPS instructions or directives, and will regularly audit the Contractor/FM Provider's inspection processes.

REPORTING

187. The Contractor/FM Provider must make the results of its inspections available to DEI on request.

TEMPLATES

REFERENCES

Guidance on Simultaneous Operations (SIMOPS), International Marine Contractors Association, IMCA, 2010

4.5 Traffic Management Plan

POLICY

188. The Contractor/FM Provider is responsible, in conjunction with the OIC Defence Area and DEI officials, for actively managing and regularly reviewing its traffic management activities on camp or base roads in relation to its construction projects, PMP works, and scheduled and unscheduled maintenance tasks. Where SIMOPS is in effect, its traffic management activities must integrate into and be subordinate to the SIMOPS traffic management processes.

189. The OIC Defence Command and DEI have approval authority over any variations of the Contractor/FM Provider traffic management plan, and may amend it at any time to meet Defence Force activities. The **Contract Administrator (Engineer to the Contract)** must be consulted in relation to any variations.

SPECIFICATIONS

Traffic Management Plan

190. Where possible or practicable, the Contractor/FM Provider must apply the New Zealand Code of Practice for Temporary Traffic Management (CoPTTM) when working on the Defence Estate.

191. The Contractor/FM Provider must develop a traffic management plan specific to the camp or base, with particular reference to:

    a. The camp or base's normal operating hours;
    b. Its entrances and exits;
    c. The road layout and signage;
    d. Peak times for vehicle and pedestrian traffic flows;
    e. Current and forecast traffic volumes;
    f. Overhead obstacles and hazards;
    g. After hours work;
    h. Emergency planning;
    i. How it will manage delays;
    j. Oversize, heavy and other special needs vehicles; and
    k. The road networks ability to cope with additional traffic in terms of capacity and road endurance and what the impact on camp or base activities might be.

192. Where Traffic Management Plan variations are required the Contractor/FM Provider must:

    a. Notify the OIC Defence Area and DEI of the intended TMP variation (using the NZTA Traffic Management Plan Short form);
    b. Secure the agreement of the OIC Defence Area before implementing the TMP variation; and
    c. Provide a minimum of 24-hours of notice to all other relevant parties.

Camp or Base Road Rules

193. The Contractor/FM Provider must ensure that workers obey the following rules:

    a. Vehicle speeds do not exceed posted or notified speed limits;
    b. Vehicles give way to pedestrians at all times;
    c. Drivers must follow the designated routes for the movement of their vehicles at all times;
    d. Vehicle weight must not exceed the weight limit of the camp or base roads; and
    e. The Contractor and workers must use the designated parking areas if driving their own vehicles to the camp or base.

The Worksite

194. On the worksite, the Contractor/FM Provider must ensure:

    a. Adequate lighting on the site;

b. Adequate signage and barricades are utilised to separate vehicles and pedestrians on Contractor/FM Provider worksites;
c. All workers wear appropriate CoPTTM compliant, high visibility (reflective) clothing;
d. Communication procedures are defined if required;
e. Daily notices on traffic movement are communicated to all worksite workers and all other relevant personnel;
f. Designated crossing pedestrian areas on access routes;
g. Designated safe zones where drivers can stand during loading/unloading activity;
h. Drivers are familiar with the site and how to move their vehicles around it;
i. Drivers are trained to use the road system on the worksite;
j. Ensure sub- and subordinate contractors working on the worksite are inducted in the Traffic Management Plan;
k. Ensuring reversing warning devices are active, and hazard lights work on all worksite vehicles;
l. Setting procedures for drivers on the site, e.g. arrival and reception procedures;
m. The road surface is safe to drive on, is at a safe gradient, properly drained, has appropriate markings, is free of obstacles and other hazards, and is wide enough to enable the movement of any large vehicles required on the worksite;
n. The traffic management plan identifies entry, exit and movement routes for light, medium and heavy vehicles;
o. The traffic management plan identifies restricted areas for vehicles;
p. The traffic management plan is readily accessible to all relevant personnel;
q. The use of spotters or dedicated traffic controllers to manage traffic and pedestrian movements;
r. The worksite access ways are planned and identified;
s. There is a mandatory and low speed limit on and around the worksite, with speed limit signs to remind drivers;
t. There is a one-way system and drive-through loading/unloading bays that reduce the need for vehicle reversing on the work site;
u. There is no smoking in vehicles while on NZDF property or assets;
v. Traffic stop lights are installed where required;
w. Vehicle movements timing minimises the numbers of people around vehicles being loaded or unloaded;
x. Warning signs exist at all entrances and exits to the worksite, and at any potential hazards on the worksite;
y. Where required, traffic calming features such as speed humps, passing places, narrowed routes using bollards or raised kerbs, and rumble devices such as rumble strips; and
z. Worksite roads are maintained to the required specifications.

Plan Review and Change Process

195. At construction stage transitions, the Contractor/FM Provider must review the traffic management plan and make those changes appropriate to the project circumstances. The Contractor/FM Provider must ensure:

a. The OIC Defence Command and DEI EDD/PM are consulted on proposed variations to the plan;
b. The needs of sub- and subordinate contractors for the next construction stage are included in the plan revision; and
c. The revised plan is fit-for-purpose in light of forecast traffic movements.

Required Training

196. Manned traffic management set ups must have a trained Traffic Management Operative (TMO) onsite at all times.

197. A trained Site Traffic Management Specialist Category A STMS (A) must monitor unmanned traffic management set ups.

AUDIT/INSPECTION

198. The Contractor/FM Provider must regularly inspect the worksite to measure the safe operation and worker compliance with the Traffic Management Plan.

199. DEI will regularly spot-inspect the operation and worker compliance with the Traffic Management Plan and audit the Contractor/FM provider's inspection processes.

REPORTING

200. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

4.5 Traffic Management Inspection Checklist

REFERENCES

NZTA - Code of Practice for Temporary Traffic
Keeping healthy and safe while working on the road or roadside, Guidance for PCBUs, WorkSafe New Zealand, August 2022
Managing work site traffic – Guidance for Keeping Healthy and Safe around Vehicles and Mobile Plant at Work Sites, WorkSafe New Zealand, February 2021
Safe Reversing and Spotting Practices; WorkSafe New Zealand, December 2020
Keeping Safe around Moving Plant, WorkSafe New Zealand, March 2014

4.6 Worksite Communications

POLICY

Worksite Communications

201. The Contractor/FM Provider is responsible for preparing and implementing a Worksite Communications Plan. The plan must ensure:

    a. No interference with NZDF communications or systems;
    b. Effective integration of project information sources into project news releases on a regular basis, e.g. DEI and Contractor Daily Notices, Safety Notifications, SIMOPS notifications, WorkSafe Notified work, Traffic Management Plan amendments, significant traffic movements, project accomplishments, issued Permits to Work, other safety issues, camp or base notifications and so on;
    c. Multiple sub- and subordinate contractors are able to work in the same area without affecting each other's communications;
    d. Listing of Contractor and sub- and subordinate contractor licenced frequencies;
    e. Notifying proposed Wi-Fi services (particularly directional systems and emitters and related device specifications to the CIS representative or Frequency Spectrum Officer on the camp or base before installation;
    f. Manage on-site photography for publicity and social media posts; and
    g. NZDF security requirements are met.

Camp or Base Frequency Spectrum Officer

202. Each NZDF camp or base has a Frequency Spectrum Officer (FSO) responsible for managing the use of the communication systems. The FSO has the authority to amend the Worksite Communications Plan to meet the needs of the camp or base as and when required.

203. Should the FSO notify the Contractor/FM Provider of unauthorised communications by workers on the worksite, e.g. using unauthorised frequencies, or using mobile phones in banned areas, the Contractor/FM provider must investigate the issue, and resolve the matter using the Non-Conformance system described in 14.4.

SPECIFICATIONS

Wireless Internet Network (Wi-Fi)

204. The Contractor/FM Provider may establish a dedicated Wi-Fi network for the worksite based on a mobile network connection to the nearest cell tower and make it available to all sub- and subordinate contractors operating on the worksite.

205. Where the Contractor/FM Provider supplies wireless connectivity and Radio Frequency Identification (RFID) tagging to manage workers, equipment, plant, and task zones and/or are supplying wireless communication devices such as smart helmets, then they may use a dedicated worksite Wi-Fi network if the scale of the worksite warrants it. The alternative would be to achieve the necessary connectivity using the mobile phone network.

Mobile Phone Network

206. The Contractor/FM Provider may use the mobile phone network while on the camp or base. However, they cannot connect with any camp or base Wi-Fi service unless permitted to do in writing by DEI.

207. The Contractor/FM Provider may not take photographs on the base without the express permission of DEI, and then only in relation to the construction work.

208. Mobile phones use must not occur in radio hazard locations (ordinance or fuel dumps). Reference in HAZID Analysis Register/FM Risk Register – note in induction.

Two-Way Radio

209. Unless notified otherwise, the Contractor/FM Provider may use the civilian band frequencies and/or their own privately owned frequencies for two-way radio traffic on the worksite. Where multiple sub- and subordinate contractors use the civilian bands, then the Contractor/FM Provider must engage with the other users to allocate frequencies within that range to individual contracting companies.

Information Boards

210. The Contractor/FM Provider must ensure that worker information boards display the information listed below, and also ensure that information displayed is current and accurate.

211. Information Board displays:

    a. Contractor/FM Provider and contact details;
    b. Project Manager name and contact details;
    c. Site Manager name and contact details;
    d. NZDF Project Manager name and contact details; and
    e. **Contract Administrator (Engineer to the Contract)** name and contact details
        (1) Number of workers/sub- and subordinate contractors on the site on the day;
        (2) Health and safety representatives plus names and contact details;
        (3) Health and safety advisers plus names and contact details; and
        (4) High risk works today

Daily Notices and Other Communications

212. The Contractor/FM Provider must prepare regular communications for the workers. They must:

    a. Inform workers at the start of each shift, of ongoing developments and work activities on the worksite and/or the camp or base;
    b. Identify health and safety impacts such as Permits to Work; and
    c. Be prepared by 3.00 pm of the previous working day.

213. The Contractor/FM Provider must notify the DEI Regional Health and Safety Specialist of substantive matters in the communications.

214. Notifications may take the form of:

    a. Printed sheets on the project office and/or canteen notice board;
    b. Daily PDF notices emailed to the workers; and
    c. Regular updates to the project's web page with associated text alerts.

Safety Notification

215. The Contractor/FM Provider must inform DEI of any potentially hazardous or disruptive activities that may impact camp or base operations, e.g. erection of cranes, a large concrete pour involving many concrete trucks, and so on.

216. The Contractor/FM Provider must provide notice in good time, up to ten working days as well as a reminder on the day.

217. The Contractor/FM Provider must display it in hard copy on worksite notice boards.

218. The Contractor/FM Provider will notify workers via pre-start, tail-gate and tool-box talks or pre-work briefings.

Contractor/FM Provider Publicity - Photography & Media Releases

219. Owing to security requirements, publicity photography on NZDF camps and bases requires approval from Directorate of Defence Security (DDS)/camp or base command before publication.

220. Media releases by the Contractor/FM Provider in relation to NZDF contracts also require DDS approval before release.

Social Media Postings

221. The Contractor/FM Provider is responsible for their own and their employees social media postings relating to NZDF contracts. All social media postings by the Contractor or sub- and subordinate contractors qualify as publicity and require DDS approval before the release of any material relating to a NZDF project.

222. NZDF policy forbids social media releases by workers on NZDF worksites relating to their work on the NZDF camp or base. The Contractor/FM Provider must notify their workers of this requirement through the induction process and in toolbox meetings that social media activity involving NZDF contract work is illegal and anyone found responsible will face the consequences.

AUDIT/INSPECTION

223. The Contractor/FM Provider must regularly inspect the worksite to measure the safe operation and worker compliance with the Worksite Communications Plan.

224. DEI will regularly spot-inspect the operation and worker compliance of the Worksite Communications Plan and audit the Contractor's inspection processes.

REPORTING

225. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

Daily Notices Submission Form
4.6 Worksite Communications Inspection Checklist

REFERENCES

4.7 Vehicles, Plant & Equipment Register

POLICY

226. The Contractor/FM Provider must establish and maintain a *Vehicle, Plant and Equipment Register* to record worksite vehicles, plant and other equipment details and enable interrogation of those details for legal use and fitness-for-purpose, i.e. are whether Contractor and sub- and subordinate contractor vehicles are street legal and plant/ equipment is serviced and safe to use.

SPECIFICATIONS

227. The Contractor/FM Provider must record the following details in their Register:

Vehicle Details

a. Registered Owner
b. Vehicle Identification Number
c. Licence Plate Number
d. Warrant of Fitness (Expiry Date)
e. Vehicle Licence (Expiry Date)

Plant and Equipment Details

a. Plant/Equipment Detail
b. Manufacturer
c. Model Details
d. Serial Number
e. Registration details (if required)
f. Registration date (if required)
g. Visual Inspection frequency
h. Required maintenance frequency (Test/Tag Frequency)
i. Last maintenance date
j. Log book (if required)
k. Person responsible for maintaining the register

Operator Details

a. Induction required (Y/N)
b. Training required (Y/N)
c. Certificate of Competence Required (Y/N)
d. Type of certification required for each item
e. Copies of relevant operator certification

AUDIT/INSPECTION

228. The Contractor/FM Provider must regularly inspect the worksite to confirm that the workers responsible for maintenance or other required activity related to vehicles or plant/equipment, have undertaken that activity, and ensure that vehicles and equipment/plant is recorded in the *Vehicle, Plant and Equipment Register* along with the workers responsible for maintenance or other required activities.

229. DEI will spot-inspect the worksite and audit the Contractor/FM Provider's inspection processes.

REPORTING

230. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATES

Vehicle, Plant/Equipment Register

REFERENCES

4.8 Health & Safety Personnel

POLICY

231. The Contractor/FM Provider is responsible for providing sufficient trained health and safety representatives (HSR) and advisers for the duration of the contract to meet the requirements of the project's construction stage. Their purpose is to identify any issues overlooked or misinterpreted by the Contractor/FM Provider work supervisors, and any shortfalls in the health and safety procedures and processes.

232. Health and safety advisers must be trained, qualified and competent, with qualifications DEI recognises.

SPECIFICATIONS

Health and Safety Qualifications

233. The Contractor/FM Provider must ensure that persons engaging in health and safety planning, monitoring and implementation on the worksite have relevant qualifications recognised by and acceptable to NZDF. That includes:

a. Project managers must have a minimum of a Site Safe Access Card;

b. Elected health and safety representatives (HSR) must hold NZQA Unit Standard 29315; and

c. Health and safety advisers must have a minimum of NZ National Certificate in Occupational Health and Safety – Level 4 (issued by a NZQA registered organisation) and have appropriate and relevant experience in construction work.

234. Depending on the nature and scope of the work, the minimum requirements for operating as a Health and Safety Supervisor on a NZDF worksite are:

- *NZQA Unit Standard 17596 – Demonstrate knowledge of safety observer responsibilities in the workplace*
- *NZQA Unit Standard 25043 Lockout and reinstate machinery in the workplace*
- *NZ Certificate in Infrastructure Works (Single Site Supervision) (Level 4) or equivalent*
- *NZ Certificate in Construction Related Trades (Supervisor) (Level 4) or equivalent*
- *NZ Certificate in Construction Trades (Supervisor) (Level 4) or equivalent*
- *NZ Certificate in Construction Trades (Main Contract) (Level 5) or equivalent*

Numbers of Health and Safety Representatives and Advisers

235. The Contractor/FM Provider must ensure sufficient health and safety advisers are present on the worksite to provide an adequate ratio of those advisers to workers on the site at all times (working with other PCBUs on the worksite to ensure the ratio is achieved). The minimum number of required health and safety representatives (HSR) and advisers is based on the total engaged workers on the worksite as set out in the following table.

Health and Safety Representatives per Workers - CAPEX Projects and Facilities Maintenance		**Minimum Health and Safety Advisers per Workers**		
All Worksite Workers/contractors	**Minimum Health and Safety Representatives**	**All Worksite Workers/contractors**	**CAPEX Projects**	**Facilities Maintenance**
1-19	1	1-50	1	1
20-38	2	51-100	2	1
39-57	3	101-150	2	2
58-76	4	151-200	3	3
77-95	5	201-250	4	4

96-114	6	251-300	5	5
115+	7	301-350	6	6

236. The Contractor/FM Provider may use 3rd party/independent qualified health and safety advisers/inspectors to support its existing workforce. SiteSafe is a 3rd party/independent health and safety adviser recognised by DEI.

237. The Contractor/FM Provider must advise DEI of any project dedicated health and safety advisors it plans to use on a worksite, and the Contractor/FM Provider must receive DEI approval before those health and safety advisors begin work on the worksite.

238. FM Provider health and safety advisors employed on a permanent basis for health and safety purposes on one or more camps and bases must possess qualifications that NZDF recognises.

239. Construction Information Boards must record the contact details of all health and safety representatives (HSR) and advisers present on the worksite at all times.

Health and Safety Representative Meetings

240. The Contractor/FM Provider is expected to hold regular health and safety committee meetings for all the health and safety representatives (HSR) on the worksite.

241. The meetings' minutes must be circulated to workers and made available on the worksite notice boards.

Camp or Base Health and Safety Committee Meetings

242. The Contractor/FM Provider must ensure that one HSR attends the camp or base health and safety committee meetings.

AUDIT/INSPECTION

243. The Contractor/FM Provider must regularly inspect the worksite to ensure there are sufficient trained health and safety representatives (HSR) and advisers on the worksite.

244. DEI will regularly spot-inspect the trained health and safety representatives (HSR) and advisers on the worksite and audit the Contractor/FM Provider's inspection processes.

REPORTING

245. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

REFERENCES

Health and Safety at Work (General Risk and Workplace Management) Regulations 2017
Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016
Health and Safety Representatives and Committees, Guidance on the Legislative Requirements, September 2023
Providing Information, Training Instruction or Supervision for Workers – Fact Sheet, WorkSafe New Zealand, July 2016
Worker Engagement, Participation and Representation – Good Practice Guidelines, WorkSafe New Zealand, July 2023
Health and Safety Representatives and Committees – Guidance on the Legislative Requirements, WorkSafe New Zealand, September 2023

4.9 'Just Culture'

POLICY

246. The Contractor/FM Provider must apply a 'Just Culture' policy - a non-punitive reporting and continuous learning system based on the premise that promotes:

    a. Reporting mistakes as beneficial, as it helps organisations improve their health and safety systems by identifying causes of mistakes and enabling them to develop solutions that stop them happening again; and
    b. Positive reinforcement of worker initiated innovative actions and health and safety improvements on the worksite.

247. The Contractor/FM Provider must ensure that workers report near misses, errors, and rules and process violations resulting from their honest efforts to do their best. The Contractor/FM Provider must ensure commendations for all sub-and subordinate contractors and their workers providing reports. The Contractor/FM Provider must also make it clear that not reporting near misses, errors, and rules and process violations may result in disciplinary action.

SPECIFICATIONS

248. The Contractor/FM Provider must:

    a. Promote 'Just Culture' on the worksite through:
        (1) Worksite noticeboards;
        (2) Safety meetings;
        (3) Newsletters, and
        (4) Managerial training programmes;
    b. Include 'Just Culture' in worksite inductions, and explain how the reporting process works through explanations and a diagram;
    c. Promote reporting innovative ideas, activities, and health and safety process improvements through commendations and rewards;
    d. Incorporate 'Just Culture' in sub- and subordinate contractor contract terms;
    e. Enable the transfer of good ideas, activities and health and safety improvements to other users; and
    f. Apply 'Just Culture' when investigating reported worksite incidents, and show how it was applied.

AUDIT/INSPECTION

249. The Contractor/FM Provider must regularly inspect the worksite to ensure worksite activities reflects 'Just Culture'.

250. DEI will regularly assess the worksite and incident investigations for evidence of 'Just Culture' activities.

REPORTING

251. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

4.9 Training and Competency Inspection Checklist
Incident Investigation Report

REFERENCES

Building a Just Culture in the Workplace, E tū
People Come First, Ministry of Business, Innovation and Employment, September 2013
Establishment of 'Just Culture' Principles in ATM Safety Data Reporting and Assessment, ESARR Advisory Material/Guidance Document, European Organisation for the Safety of Air Navigation, March 2006, skybrary.aero/sites/default/files/bookshelf/235.pdf

4.10 Specification Amendment (SPA) Requests

POLICY

252. The Contractor/FM Provider may request changes to CHESS policy, specifications, procedures, and processes and other requirements to meet specific project circumstances. Doing so requires a formal Specification Amendment (SPA) request.

253. The RHSS will make an immediate determination for minor changes or the Deputy Director of Health and Safety will decide on any major changes. DEI will process any SPA Requests in good time with the RHSS consulting with other parts of NZDF as needed.

SPECIFICATIONS

254. The Contractor/FM Provider must make SPA Requests using the SPA Request Form. The form requires the reason for the request, including the risk assessment for the requested changes. That may include a new or revised Job Safety Analysis relevant to the Request.

255. The Contractor/FM Provider must supply adequate information to support the SPA Request, including such material as the practical issues associated with the request, advice from subject matter experts and plant and equipment manufacturers, and changes to Approved Codes of Practice or WorkSafe guidance documents. For matters involving changes to environmental management processes, DEI will refer the matter to the DEI Director Environmental Services.

256. DEI will notify the Contractor/FM Provider of the outcome of the request.

AUDIT/INSPECTION

257. The Contractor/FM Provider must regularly inspect the worksite to measure the effectiveness of the requested change.

258. DEI will regularly spot-inspect the worksite for the effectiveness of the change and audit the Contractor/FM Provider's inspection processes.

REPORTING

259. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

260. The Contractor/FM Provider must report on the results of a successful SPA Request. Where the results are positive and applicable to future DEI projects, DEI may amend CHESS to reflect that.

TEMPLATES

SPA Request Form

PROCESSES AND PROCEDURES

SPA-A Contractor Specification Amendment Request Process Map
SPA-A: Contractor Specification Amendment Request Procedure

REFERENCES

5 SEPARATE CONTRACTORS

261. NZDF may arrange for concurrent worksite works not included in a specific Contractor's contract to be performed by Separate Contractors.

262. These Separate Contractors may be NZDF or other government agency employees or other Contractors engaged who are not subject to the Contractor's/FM Provider's health and safety and site management processes but will be named or referred to in a Contractor's contract under Special Conditions.

5.1 Combined Worksite Management Committee

POLICY

263. Where NZDF has engaged one or more Separate Contractors/FM Provider to simultaneously undertake works on the worksite the Separate Contractors/FM Provider must establish a combined worksite management committee (similar to a SIMOPS in intent) with representatives of the Separate Contractors, FM Provider, the OIC Defence Area, and DEI, as required to:

a. Coordinate and deconflict worksite activities insofar as the activities of the Separate Contractors affect their respective activities on and around the worksite;

b. Manage application of the respective CSMP's/FMSMP's and all other CHESS compliance activities; and

c. Manage all other worksite worker welfare and related management processes.

SPECIFICATIONS

264. The Separate Contractors/FM Provider shall convene the Combined Worksite Management Committee as regularly as it is required to effectively manage coordination and deconfliction of worksite activities.

265. The Separate Contractors/FM Provider shall record decisions made by the Combined Worksite Management Committee.

AUDIT/INSPECTION

266. DEI will regularly review the Combined Worksite Management Committee's activities.

REPORTING

267. The Separate Contractors/FM Provider must make the records of the Combined Worksite Management Committee's meetings available to DEI on request.

TEMPLATES

REFERENCES

PCBUs working together: advice when contracting, WorkSafe New Zealand guidance

5.2 Overlapping Construction Safety Management Plan/Facilities Maintenance Safety Management Plan

POLICY

268. Where the timelines of Separate Contractors/FM Provider overlap, such as horizontal works and vertical works for a construction project, then the Separate Contractors will have different CSMPs/FMSMPs developed for their specific phases of the overall construction project.

269. It is the responsibility of the Separate Contractors/FM Provider to collaboratively resolve any CSMP/FMSMP conflicts.

SPECIFICATIONS

270. Ideally, rather than altering the respective CSMPs/FMSMP to reflect the overlapping presence of the Separate Contractors on the construction site, the Separate Contractors/FM Provider shall apply the mechanism of the Combined Worksite Management Committee to coordinate and deconflict worksite activities.

271. Where it is found there are irreconcilable health and safety differences between the respective CSMPs/FMSMP for specific worksite activities, the relevant Regional Health and Safety Specialist shall, in consultation with the camp or base Estate Delivery Director and OIC Defence Area select the most appropriate solution or solutions for the circumstances, and require the parties to amend the CSMPs/FMSMP and any relevant JSAs to reflect that decision, and undertake the worksite activities in a manner which reflects the selected solution or solutions.

AUDIT/INSPECTION

272. Where a RHSS has determined an appropriate solution or solutions to resolve otherwise irreconcilable differences between CSMPs/FMSMP, DEI will audit the worksite to determine compliance with the RHSS solution or solutions, and issue Non-Conformance Notifications where noncompliance with the solution or solutions is shown.

REPORTING

273. Where a RHSS, in conjunction with the Estate Delivery Director and the OIC Defence Area, has determined an appropriate solution or solutions to resolve otherwise irreconcilable differences between CSMPs/FMSMP, the RHSS will report on the outcome to DEI and the Separate Contractors/FM Provider will report on the results of the selected solution or solutions.

TEMPLATES

REFERENCES

5.3 Application of Primary Contractor's Construction Safety Management Plan

POLICY

274. Where the timelines of Separate Contractor's overlap, such as vertical works and furniture, fittings, and equipment, and it is possible for the latter Separate Contractor to operate safely within the parameters of the earlier CSMP/FMSMP, then the latter Separate Contractor shall do so, subject to the decisions made by the Combined Worksite Management Committee,

SPECIFICATIONS

275. Under ideal conditions, the latter Separate Contractor is able to successfully operate under the earlier CSMP/FMSMP without issue. Where it proves that that is not possible, then the RHSS, in conjunction with the EDD and the OIC Defence Area shall select the most appropriate solution or solutions for the circumstances and require the parties to amend the CSMPs/FMSMP and any relevant JSAs to reflect that decision and undertake the worksite activities in a manner which reflects the selected solution or solutions.

AUDIT/INSPECTION

276. Where a RHSS in conjunction with the Estate Delivery Director and the OIC Defence Area has determined an appropriate solution or solutions to resolve otherwise irreconcilable differences between CSMPs/FMSMP, DEI will audit the worksite to determine compliance with the RHSS solution or solutions, and issue Non-Conformance Notifications where noncompliance with the solution or solutions is shown.

REPORTING

277. Where a RHSS has determined an appropriate solution or solutions to resolve otherwise irreconcilable differences between CSMPs/FMSMP, the RHSS will report on the outcome to DEI and the Separate Contractors/FM Provider will report on the results of the selected solution or solutions.

TEMPLATES

REFERENCES

6 SUB- AND SUBORDINATE CONTRACTOR PREQUALIFICATIONS

INTRODUCTION

279. DEI requires that sub- and subordinate contractor health and safety policies, processes and procedures are compatible with NZDF worksite health and safety objectives. They must also be fit for purpose when delivering against those objectives.

280. The Contractor/FM Provider is responsible for ensuring that all sub-and subordinate contractors are prequalified before beginning work on a NZDF worksite, and that includes ensuring their health and safety policies and processes meet NZDF worksite health and safety objectives.

6.1 Pre-Qualification Process

POLICY

281. The Contractor/FM Provider is responsible for pre-qualifying sub- and subordinate contractors.

SPECIFICATIONS

282. The Contractor/FM Provider must apply the following measures to sub-contractor selection. The Contractor/FM Provider must also require its sub-contractors to apply the same measures to the employment of subordinate contractors. Those measures are:

    a. Valid and current prequalification provided by a suitable NZ-based prequalification organisation such as ISNET, PREQUAL, SHE-ASSURE or SITEWISE;
    b. ACC Experience Rating Programme score (if available);
    c. NZDF/DEI health and safety audit scoring (if available);
    d. Prior contract performance audit scoring (if available).
    e. Past performance in worksite health and safety delivery, including similar contracts;
    f. Existing accreditation/certification under recognised worksite health and system management programmes;
    g. Recent 3rd party health and safety auditing reports;
    h. Incident and accident reports;
    i. Sample Job Safety Analyses;
    j. Reporting on hazards procedures;
    k. Reporting on incidents procedures;
    l. Risk and hazard assessment processes;
    m. Worker health and safety training;
    n. Worker training programmes;
    o. Worker supervision processes;
    p. Performance monitoring processes and review methods;
    q. Sub-contractor selection and management processes; and
    r. Health and safety prosecutions.

283. The Contractor/FM Provider must provide DEI with the results for those sub-contractors selected for work on the project, and ensure that those sub-contractors submit their own results for subordinate contractors through the Contractor/FM Provider to DEI.

284. All works that use a Short Form Agreement require the Contractor to meet the requirements outlined in paragraph 282 (a-d).

Pre-Qualification Minimum Requirement

285. Where sub-contractors are hiring subordinate contactors, then the Contractor/FM Provider must participate in that process.

286. The minimum requirement from pre-qualifying organisations like ISNET, PREQUAL, SHE-ASSURE or SITEWISE is a valid and current prequalification.

287. The Contractor/FM Provider must review the prequalification reports and associated paperwork, and discuss any issues that arise from that material, with particular reference to the work the sub- or subordinate contractor is undertaking on the worksite.

288. Where the sub-or subordinate contractor prequalification expires or is withdrawn by the prequalification organisation, then the sub- or subordinate contractor must immediately notify the Contractor/FM Provider and reapply for recertification by the prequalification entity, and notify the Contractor/FM Provider when it has been recertified by the prequalification entity. Where a prequalification is not reissued by the prequalification entity then the Contractor/FM Provider must notify DEI and take appropriate action to resolve the matter in manner which ensures effective management and delivery of health and safety measures on the worksite.

AUDIT/INSPECTION

289. DEI will regularly audit the Contractor/FM Provider's prequalification process.

REPORTING

290. The Contractor/FM Provider must notify DEI if a sub-or subordinate contractor fails the pre-qualification process.

TEMPLATES

REFERENCES

Accredited Employers Programme – Audit Standards, Accident Compensation Corporation, 2017
Accident Compensation (Experience Rating) Regulations 2019
www.impac.co.nz/prequal
www.sitewise.com
www.isnetworld.com
www.nz.shesoftware.com

7 CONTRACTOR PERFORMANCE MANAGEMENT

INTRODUCTION

291. Contractor performance management is a systematic process that measures project inputs, outputs and final project outcomes against objective success or failure measures.

292. The process to measure health and safety performance on the worksite uses the same model. The Contractor Health and Safety Performance Score is the result of measuring inputs, the health and safety controls, and accompanying processes and procedures, against the project's health and safety objectives.

293. The *Construction H&S Indicative Performance System (CHIPS)* establishes and collects the results of inspections and audits, incidents, and any other matters pertinent to the measurement of health and safety performance on the worksite and generates the Performance Score. Selection of contractors for DEI contracts will include consideration of contractors' past Performance Scores.

7.1 Construction H&S Indicative Performance System (CHIPS)

POLICY

Purpose

294. Pursuant to the Health and Safety at Work Act 2015, DEI (on behalf of NZDF) has a primary duty to ensure, so far as reasonably practicable, the health and safety of its staff, main contractor staff and sub- and subordinate contractor staff on DEI worksites.

295. DEI's health and safety duties include monitoring the interconnected relationships, such as contract management and health and safety monitoring and engagement.

296. DEI's monitoring duties are not just restricted to managing injury surveillance data, but include other essential elements, such as ensuring effective communication and engagement and clear roles, responsibilities and systems to manage complex working arrangements. A central part of monitoring health and safety outcomes is the relationships between various parties, which under the HSWA, starts with the person conducting a business or undertaking (PCBU).

297. Based on primary health and safety resources, e.g. *Measuring and Reporting on Work Health and Safety* (Safe Work Australia), *Health and Safety Guide: Good Governance for Directors* and Lead Indicators (WorkSafe New Zealand), and *A Guide to Measuring Health and Safety Performance* (Health and Safety Executive UK), DEI has developed a Performance Monitoring and Verification Model that covers three broad types of hazards: **technical, cultural** and **governance** issues (see Figure 1).

298. These form interconnected pillars[4] to underpin the effective management of Health and Safety by ensuring:

a. Sound hazard identification and risk management conducted by management in consultation with workers.

b. Strong leadership with a robust safety culture.

c. Effective mechanisms of Health and Safety oversight and control.

Figure 11 - Performance Monitoring & Verification

[4] *Measuring and Reporting on Work Health and Safety*, Safe Work Australia, March 2017

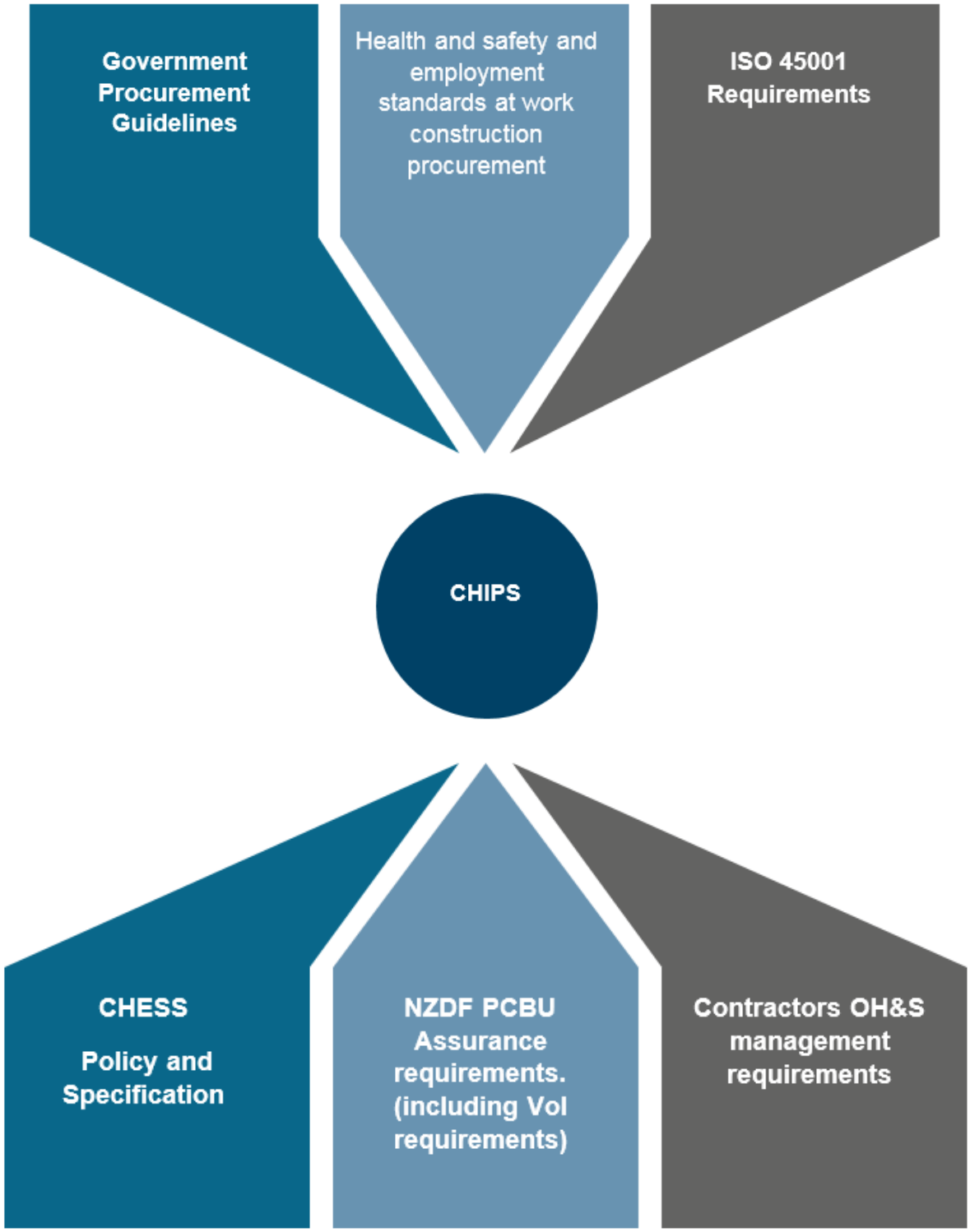
299. This model underlies DEI adoption of the Construction H&S Indicative Performance System (CHIPS) which assesses Contractor/FM Provider management of three broad types of hazards:

a. Governance Control – strategy, resourcing and monitoring;
b. Culture Controls – motivation, behaviour and attitude; and
c. Technical Controls – hazard identification, risk management, and controls/defences.

DEI Monitoring Requirements

The requirements to monitor are derived from the following figure.

Figure 12 - CHIPS Monitoring Requirements



300. CHIPS measures Contractor/FM Provider health and safety performance over time. This supports assessment by DEI/NZDF as to whether the Contractor/FM Provider's performance is good (i.e. no additional support required to improve H&S performance), or there is room for improvement (in which case DEI will work closer with the Contractor/FM Provider to improve their H&S performance).

301. CHIPS monitors the following relationship areas:

a. Staff engagement & perception of Health and Safety in the workplace;
b. Project / Site leadership and engagement;
c. Contractor/FM Provider management relationships;
d. Hazard /Risk management;
e. Project / Site stakeholder relationships;
f. Incident engagement;
g. Promotion of good health and safety practices.

302. CHIPS gives effect to the Health and Safety at Work Act, Government Procurement Rules, ISO 45001 Standard, Health Safety and Employment Standards at Work Construction Procurement, and CHESS.

SPECIFICATIONS

Adopting and Applying CHIPS

303. The Contractor/FM Provider must adopt and apply the relevant health and safety inspections and reporting processes as specified in CHESS at the frequency set in the CSMP/FMSMP.

304. See the Construction H&S Indicative Performance System (CHIPS) – Instructions for Use in the CHIPS User Guide in Arc GIS.

AUDIT/INSPECTION

305. The Contractor/FM Provider will regularly review its processes with a view to continual improvement, and DEI will spot check and audit the Contractor/FM Provider's processes on a regular basis.

REPORTING

306. The RHSS will report corrective or preventative actions to the Contractor/FM Provider as Non-Conformance Notifications, and the Contractor/FM Provider must prepare a Non-Conformance Report.

307. The RHSS will review corrective or preventative actions after each reported inspection, non-conformance notifications and incidents and notify the Contractor/FM Provider of the resulting score.

308. DEI will review corrective actions resulting from significant events and/or major non-conformance items within thirty days and again at six months to ensure conformance.

TEMPLATES

DEI CHIPS Health and Safety Scoring

REFERENCES

Measuring and Reporting on Work Health and Safety, Safe Work Australia, March 2017
Health and Safety Guide: Good Governance for Directors, WorkSafe New Zealand, March 2016
Lead Indicators, WorkSafe New Zealand, ACC, MBIE, 2017
A Guide to Measuring Health and Safety Performance, Health and Safety Executive, December 2001
Monitoring what matters, Business Leaders' Health and Safety Forum, May 2019
Safe Plus - Health & Safety Performance Requirements, WorkSafe New Zealand, ACC, Ministry of Business, Innovation & Employment, May 2023

8 INDUCTIONS & SECURITY

INTRODUCTION

Inductions

309. Workers must be inducted for NZDF, individual camps or bases, and worksites.

310. NZDF and camp or base inductions may occur in-person or online, while worksite inductions must occur at the worksite.

311. Where workers attend NZDF or camp or base inductions, DEI officials and the Contractor/FM Provider are responsible for the NZDF and camp or base inductions while, the Contractor/FM Provider is responsible for the worksite induction.

Security Requirements

312. Working on Camps and Bases requires the Contractor/FM Provider and their workers to comply with the camp or base security protocols, and submit to lawful use of search and detention powers held by the OIC Defence Area. The Contractor/FM Provider is also required to notify its workers and sub- and subordinate contractors of the potential application of those powers.

313. Project documentation is subject to security protocols, with the emphasis being that NZDF owns all the documents relating to the project, and that the Contractor/FM Provider must comply with NZDF's document management and security measures.

8.1 Inductions

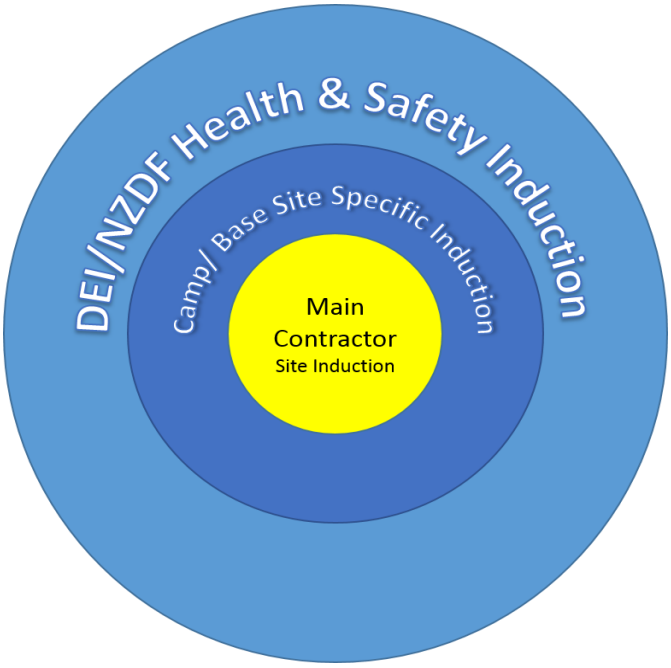


Figure 13 - Health and Safety Inductions

POLICY

DEI/NZDF Induction

315. Prior to beginning work at a NZDF camp or base Contractor/FM Provider he Contractor/FM Provider and their staff and sub-and subordinate contractor staff assigned to a construction project, PMP works and maintenance tasks working at the NZDF camp or base must receive the NZDF inductions.

316. Before beginning work on the worksite, the Contractor/FM Provider must also induct workers for that worksite.

317. The DEI induction introduces fundamental elements that include but are not limited to:

    a. **CDF Safety Policy Statement** - HDEI Statement of Commitment and Stop Work Authority cards;
    b. **Behavioural Standards** - Relevant NZDF behavioural standards, policy and values including Operation RESPECT and diversity and inclusion;
    c. **Security and misconduct policies**; Camp or base security and misconduct protocols;
    d. **Safety Golden Rules and Safety Non-negotiables** – Core safety rules that include, Teamwork, Communication, Work Smart, Work Safe, Continual Improvement;
    e. **Job Safety Analysis Process including Top Event** – Short Course on Principles of Bow-Tie Analysis and Top Events, e.g. loss of control; to establish sound risk management in the Contractor/FM Provider's Job Safety Analysis;
    f. **Permit to Work Process** – DEI has developed a Permit to Work system to assist in overall control and oversight of high risk works across multiple worksites or worksites with conflicting activity and Camp/Base operations (SIMOPS). The DEI/NZDF induction ensures sub- and subordinate contractors are aware of and use DEI's *Permit to Work* systems and its requirements;
    g. **Incident Reporting Process** – DEI's incident reporting process and procedure notifies all relevant parties on a Camp/Base, at the appropriate level, of incidents and near misses. The DEI/NZDF induction ensures sub- and subordinate contractors are aware and understand the reporting process and their responsibilities;

h. **Issue Notification process** – Instructions when encountering Undocumented Services, Unexploded Ordnance, Contaminated Sites and Cultural Artefacts – Covers the rules of accidental discoveries and what to do in the event of an accidental discovery; and

i. **Electronic Devices** - Appropriate use of Mobile Phones, Cameras and Social Media - The circumstances under which workers may use these devices or services.

Camp or Base Induction

318. Inductions for NZDF camps or bases are valid for 12 months and workers must receive an induction every 12 months while working on the camp or base.

319. The camp or base induction will include but is not limited to:

a. The layout of the camp or base relevant to the work occurring;
b. Camp or base security and misconduct protocols and displaying security cards;
c. Specific camp or base hazards;
d. Areas, buildings and services that workers may access for work purposes as well as those they may not access;
e. Access routes into the base/camp relevant to the work occurring;
f. Policing/Security on the camp or base;
g. Vehicle parking;
h. Contractor Pass and Site Safe Access Card; and
i. Camp or base security requirements, e.g. entering and leaving the base/camp, displaying and producing photo identification when required and entering and leaving secured buildings.

Work Site Induction

320. The Contractor/FM Provider is responsible for providing worksite inductions. The detail required for the worksite induction is conditional and tailored to the nature and type of worksite, the particular construction stage of a project, the number and variety of trades on the worksite, and the changes occurring over the worker's tenure on the worksite.

Unit Induction

321. Some camp or base worksites require a NZDF Unit induction to explain the specific worksite hazards (e.g. hangar), before the worksite induction.

322. The induction must include health and safety training about the specific worksite issues before starting work, including:

a. Known and potential worksite hazards;
b. Worksite activities and the needed precautions to take during the course of their work while on the worksite;
c. Individual worker health and safety responsibilities;
d. Emergency procedures and their role in them; and
e. Worksite incidents and worker responsibilities.

SPECIFICATIONS

323. The Contractor/FM Provider must create and maintain a Training and Competency Register for all persons inducted by NZDF. Inductions are valid for twelve months, and the Contractor Pass displays that information. The Contractor/FM Provider must notify workers when their NZDF and/or camp or base inductions are due to expire and arrange renewal.

324. The Contractor/FM Provider must create and maintain the Training and Competency Register for the worksite. Inducted workers must fill out and sign the Worksite Induction Register. Then Contractor/FM Provider must induct workers on arrival and at the beginning of construction stages.

AUDIT/INSPECTION

325. The Contractor/FM Provider must regularly inspect worker induction details to ensure their inductions are current.

326. DEI will spot-inspect worker induction details, and audit the Contractor/FM Provider's induction processes and content.

REPORTING

327. The Contractor/FM Provider must make the Training and Competency Register available to DEI on request.

TEMPLATES

4.9 Training and Competency Inspection Checklist
Training and Competency Register

REFERENCES

http://www.safeworkaustralia.gov.au/system/files/documents/1703/information-sheet-work-induction-for-construction.pdf

https://www.worksafe.govt.nz/topic-and-industry/road-and-roadside/keeping-healthy-safe-working-road-or-roadside/part-d/29-0-inductions/

www.sitesafe.org.nz/guides--resources/practical-safety-advice/site-inductions/

8.2 Camp & Base Security

POLICY

328. While working on a NZDF camp or base, the Contractor/FM Provider's personnel and all other project workers are subject to the *Defence Act 1990* and the *Defence Regulations 1990*. The legislation empowers the OIC Defence Area to:

    a. Prohibit the entry of any person into a defence area, and compel any person to leave a defence area;
    b. Search any person, bag, receptacle, vehicle or temporary buildings in a defence area;
    c. Require disclosure of name and address information and the reason for a person's presence in a defence area; and
    d. Apprehend and detain persons committing offences such as:
        (1) Entering a defence area without lawful excuse;
        (2) Vandalising NZDF property;
        (3) Wilfully obstructing the officer in charge of a defence area, or a person authorised by the officer in charge to possess and discharge the police powers described above, or a constable.

329. Persons authorised to use these powers may be the NZDF Military Police, any authorised NZDF person, and any 3rd party security organisation employed to provide security on the camp or base.

330. Workers must display their Contractor Cards at all times, and authorised NZDF personnel may demand they produce them for identity verification at any time.

331. Workers, their vehicles, bags, parcels or chattels of any description in a person's possession or under that person's control may searched at any time by authorised personnel. However, no person of the opposite gender may search, or be in the presence of a person undergoing a search.

332. Refusal of detention or to refusing to permit or submit to a search or resistance to a search entitles the authorised NZDF person to use such force as may be reasonably necessary to effect the detention or search.

333. The authorised NZDF person may seize anything reasonably believed has been used or is being used to commit an offence. That thing may be disposed of as considered appropriate by a Court or returned to the person if there are no proceedings or where there is an acquittal.

334. Any person detained by authorised personnel for any reason will be handed over to NZ Police for arrest and possible prosecution.

SPECIFICATIONS

Camp or Base Security Protocols

335. NZDF camp or base inductions include details of camp or base security protocols but the Contractor/FM Provider must repeat that information in the worksite induction.

Working Hours

336. The Contractor/FM Provider must observe the camp or base's working hours (usually 7.30 am to 5.30 pm Mondays to Fridays). DEI will authorise work outside those hours.

Defence Site Clearance

337. Unescorted access on a camp or base requires a Defence Site Clearance (DSC). To obtain a DSC workers must complete the MD390 form, and submit it to NZDF for vetting.

338. Rejected applicants cannot work on a camp or base. Applicants must allow at least twenty working days for NZDF vetting. Only persons with a valid DSC may apply for a Contractor Pass for the camp or base.

Camp or Base Contractor Passes

Types

339. All construction and maintenance workers must have a Contractor Pass issued by NZDF before entering a camp or base. These come in three types. They are:

    a. Contractor Passes for ongoing maintenance work on the camp or base for long-term service contracts. These are issued for up to two years; and

    b. Contractor Passes for specific and fixed-term construction projects with end dates based on the projected project end date, with a buffer for project delays adding up to a maximum of two years.

    c. Temporary Contractor Passes (Marked Temporary) issued as short-term replacements for lost Contractor Passes. DEI officials must not issue Temporary Contractor Passes for any purpose other than as a short-term replacement for a lost Contractor Pass.

Obtaining a Contractor Pass

340. Getting a Contractor Pass requires the applicant to:

    a. Have a Defence Site Clearance; and

    b. Present a valid form of identification i.e.:

        (1) NZ Driver Licence

        (2) Passport

        (3) Current Kiwi Access Card or 18+ Card

        (4) NZ Firearms Licence

        (5) Certificate of Identity (issued pursuant to the *Passports Act 1992*)

        (6) Refugee Travel Document issued by or on behalf the New Zealand Government

        (7) Birth certificate issued after 1 January 1998 plus an accompanying Identity Referee Statement

341. When notified to appear by the NZDF official (after the DSC is granted), the applicant must present the required identification documents, and have a photograph taken, and only then will the NZDF official issue the Contractor Pass card.

342. Under no circumstances will the camp or base accept Site Safe Access Cards as valid photo identification.

Lost Contractor Passes

343. If a worker notifies DEI of a lost Contractor Pass, DEI will revoke the lost Contractor Pass, and require the worker apply for a new one.

344. The worker must complete the MD390 form and submit it to NZDF for vetting. DEI will issue a Temporary Contractor Pass for the vetting period.

345. If NZDF accepts the worker after the vetting is complete, DEI will issue a replacement Contractor Pass suitable for the worker's role on the camp or base. If NZDF rejects the worker's application, then DEI will revoke the Temporary Contractor Pass.

Change of Circumstances

346. The Contractor/FM Provider must immediately notify DEI of changes of worker address and any other changed contact details e.g. mobile numbers or email addresses. Where the worker has a major change of appearance, e.g. growing or shaving a heavy beard, then the worker must apply for a new Contractor Pass.

347. The Contractor/FM Provider must notify DEI of any changes to the DSC holder's circumstances which may impact their ability to hold a DSC. That includes any criminal charges or civil proceedings, dismissal or suspension or any other matters capable of bringing disrepute to NZDF.

Transitional Arrangements

Existing Contractor Passes

348. The new Contractor Access pass system invalidates all earlier contractor access passes issued by camps or bases. All existing pass holders must apply for new contractor passes, but may continue to use the earlier passes until issued new ones.

Temporary Access to Camps and Bases

349. Workers required for urgent work on a camp or base who do not have Contractor Passes require the approval of DEI to enter the camp or base.

350. The Contractor/FM Provider must request the approval of DEI by completing the Worker Access Approval Form listed below.

Vehicle Access Passes

351. Camps and bases may issue Vehicle Access passes for contractor vehicles depending on the nature of their work on the camp or base.

Contractor Pass Register

352. The Contractor/FM Provider must regularly consult with the camp or base command about when their NZDF and/or camp or base inductions and issued Contractor Passes are due to expire and arrange renewal as required.

353. The Contractor/FM Provider must ensure that workers employed for fixed-term projects, or who are no longer employed by NZDF or by their NZDF approved employer return their cards at the end of their assignments or employment arrangements.

Camp or Base Security

354. The Contractor/FM Provider must ensure that reminders of NZDF and camp or base health and safety and security expectations and requirements are included in their worksite inductions.

Tracking Software

355. The Contractor/FM Provider must inform NZDF of any Worker tracking applications being used to track workers while on site, along with details of the server being used to store the tracking data.

AUDIT/INSPECTION

356. The Contractor/FM Provider must regularly inspect worker Contractor Passes to ensure their passes are current.

357. DEI will spot-inspect worker Contractor Passes, and audit the Contractor/FM Provider's inspection processes.

REPORTING

TEMPLATES

Document Register

REFERENCES

Defence Regulations 1990, Part 3

8.3 Document Management

POLICY

Documentation Ownership Rights and Transfer to NZDF

358. NZDF owns all project documentation, including that generated by the Contractor/FM Provider and sub-contractors in relation to operations occurring on or in relation to each NZDF worksite.

359. The Contractor/FM Provider must transfer to NZDF all hard copy and electronic versions of building plans, as-built drawings, plant operator manuals and any other documentary material prepared for the construction project developed or acquired by themselves, and developed or acquired by sub-and subordinate contractors during the course of a construction project, PMP works or maintenance tasks.

360. That includes all electronic and optical storage devices the material was stored on and deleting all data files held off-site in Cloud data storage services.

Contracts

361. The Contractor/FM Provider must ensure that all contracts between it and its sub-contractors, as well as those between sub- and subordinate contractors include provisions that relate to NZDF hard copy and electronic document ownership, with the requirement that ownership transfers to NZDF at the end of the contract.

362. The Contractor/FM Provider must ensure that when a sub- or subordinate contractor's role on the worksite ends it recovers and stores, as appropriate, all documents, drawings and other documents prepared or acquired by the sub- and subordinate contractors over the course of their work on the worksite.

Discarded & Shredded Documents & Other Material

363. NZDF owns all documents, drawings, and other material related to the project discarded by the Contractor/FM Provider for any reason between accepting the tender and the issuance of the Final Completion Certificate.

364. Where the Contractor/FM Provider and sub- and subordinate contractors shred hard copy drawings and documents over the course of the project the shredded material must go to NZDF at the end of their involvement in the project.

Document Control Register

365. The Contractor/FM Provider is responsible for creating and maintaining a register of all documents, drawings and other materials prepared over the course of the project prepared by it and sub- and subordinate contractors.

366. The Document Control Register must be transferred to NZDF in a readable format or hardcopy along with all the project documentation and drawings discussed above

Document Security & Storage

367. The Contractor/FM Provider is responsible for keeping all hard copy documents, drawings, and other material related to the project in secure storage and electronic documents, drawings, and other material in encrypted electronic formats.

368. The Contractor/FM Provider must maintain all documents generated in accordance with CHESS inspection or reporting requirements in a readily retrievable format on the worksite, and where possible, backed up securely off-site (until project completion and project documents and drawings etc., are handed over to NZDF and off-site copies are deleted).

DEI Document Control System & Templates

369. Where required by CHESS, the Contractor/FM Provider will apply the DEI Document Control System to manage documents generated through the course of the project.

SPECIFICATIONS

Document Ownership

370. The Contractor/FM Provider must retain all documents, drawings and other material related to the project until transfer to NZDF. The Contractor/FM Provider must also acquire from sub- and subordinate contractors all documents, drawings and other material in hard copy and electronic format generated or acquired by them during the course of the project. The Contractor/FM Provider must ensure, so far as is practicable, that sub and subordinate contractors do not retain relevant material after the completion of their role in the project.

371. The Contractor/FM Provider must transfer all hard copy documents and drawings and any other material in hard copy and scanned electronic format (PDF). After doing so, the Contractor/FM Provider must then delete all documents, records and all other material related to the project held in electronic format.

Discarded and Shredded Documents

372. The Contractor/FM Provider must store discarded and shredded documents, drawings, and other material, and transfer that material to NZDF at the completion of the contract.

Document Control Register

373. The Contractor/FM Provider must create and maintain a register of documents, drawings and other hard copy and electronic material prepared over the course of its involvement in the project.

Document Security & Storage

374. The Contractor/FM Provider's hard copy and electronic data storage systems must comply with AS/NZS ISO/IEC 27002:2022 Information security, cybersecurity and privacy protection – Information security controls.

DEI Document Control System & Templates

375. The Document Control System (DCS) will apply the DEI Document Control identification system, consisting of:

Term	Format
DCS Identification Structure	***PVID#-Base-ContractorID-type-yymmdd-vn(aaaaa)***
Planview Project ID	***PVID#***– is the Planview ID# for the project
Project location, i.e. camp or base	***Base*** – is the 3 character camp/base code
Contractor ID	***Contractor ID*** – is the ID number given to the contractor in JARS
Document type	***Type*** –All DEI CHESS templates are assigned a 3-letter ***Type*** code. For Example: **ICE** is short for 'Inspection Checklist and Evaluation'; **PTW** is short for 'Permit To Work' **JSA** is short for 'Job Safety Analysis

	Etc.
Date	***Date*** – the date in the format yymmdd calculated by the spreadsheet from the Inspection date.
Version numbers	***vn*** – The version number of the document (this will normally be '1' but can be changed if the form is amended).
Additional information	***(aaaaa)*** – Additional information for selected templates and documents. e.g. page numbers, employee initials, etc.
Sample	*12345-BHM-21-ICE-190223-v1*

Front Cover Sheet

376. Documents will use the following templates:

Document Control

Document Identifier e.g. 12345-BHM-21-INSP-190223-v1	
Version Number - 1.1 format	Revision Date – yymmdd format

Signoffs and Approvals

Position	**Approver Name**	**Signature**	**Date**

Version History

Version	**Date**	**Name**	**Description**

Contacts

Contacts	**Name/Title**	**Phone**	**Email**

Footers

377. The footers of documents will be marked with the DEI Document Control Register number, the page number and the words 'In Confidence'.

AUDIT/INSPECTION

378. DEI will inspect the document register regularly, and confirm that it is an accurate rendition of the documents and drawings and other material prepared for the project.

379. DEI officials will regularly spot-inspect and audit project related Contractor/FM Provider documents to ensure compliance with the Document Control System and the associated templates.

REPORTING

380. The Contractor/FM Provider must make the document register available to DEI on request.

TEMPLATES

Document Register

REFERENCES

AS/NZS ISO/IEC 27002:2022 Information security, cybersecurity and privacy protection – Information security controls

9 HAZARDOUS SUBSTANCES MANAGEMENT

INTRODUCTION

381. CHESS sets out a set of rules for the storage, use, handling and transport of hazardous substances on the camps or bases. Those rules are based on legislative requirements, standards and regulatory guidelines.

382. Transportation of hazardous substances to and from a camp or base, and storage and use of them on the camp or base requires permission from the NZDF Approved Handler or Compliance Officer, as required.

383. The actual use of hazardous substances on a camp or base is subject to the Contractor's Hazardous Substances Management Plan or the FM Providers FMSMP. The Hazardous Substances Management Plan or the FMSMP sets out the processes and procedures required to safely store and use the hazardous substances on the worksite, and sets out the emergency procedures to follow in the event of an incident involving hazardous substances.

9.1 Hazardous Substances & Other Chemicals

POLICY

385. The Contractor/FM Provider is responsible for the safe transport, storage, worksite use and disposal of hazardous substances and other chemicals.

386. The camp or base Hazardous Substances Adviser and/or respective Service Hazardous Substances Prime Delegate must approve and monitor hazardous substances storage systems and location/s.

SPECIFICATIONS

Hazardous Substances Management Plan

387. The Contractor/FM Provider must identify any hazardous substances required or likely to be required for the construction project, PMP works, or maintenance task, and apply the hierarchy of hazard controls analysis to those substances to:

    a. Identify alternative solutions which eliminate the need to use the hazardous substances; or
    b. Identify alternative substances which is hazardous; or
    c. Apply engineering controls which isolate the hazardous substances; or
    d. Apply administrative controls such as:
    e. Changes to procedures;
    f. Provide training; and/or
    g. Provide signs and warning labels.
    h. Ensure appropriate personal protective equipment as specified on the manufacturers Safety Data Sheet is serviceable and available; and
    i. Determine on-site decontamination requirements and provide appropriate facilities.

388. The Contractor/FM Provider must:

    a. Prepare and implement a Hazardous Substances Management Plan (*HSMP*), which must include post-emergency recovery processes e.g. remedial and disposal actions;
    b. Obtain the approval of the NZDF Approved Handler or Compliance Officer, as required for the *HSMP*;
    c. Ensure the safe storage, labelling, use and disposal of hazardous substances used on the worksite over the course of the project; and
    d. Include the HSMP in the CSMP/FMSMP.

389. The Contractor/FM Provider must use the CSMP template/FMSMP template when preparing the plan.

390. The Contractor/FM Provider must ensure that all workers involved with transporting, storing, using and disposing of the hazardous substances hold, where applicable, a Controlled Substances Licence relevant to the hazardous substance.

391. Additionally, the Contractor/FM Provider must ensure that certified handlers, where applicable are used if:

    a. Hazardous substances in use require a controlled substance license (CSL), such as most explosives and fumigants);
    b. Acutely toxic (Class 6.1 A and 6.1B substances are used; and
    c. Hazardous substances with a Class 2, 3, 4 , 5, 6.1A and 6.1B classification.

392. The Contractor/FM Provider must ensure that a competent person is responsible for receiving, and accepting responsibility for managing, storing the hazardous substances and maintaining tracking records for tracked substances. The Contractor/FM Provider must regularly report on the validity of the certifications held by those competent persons.

393. Appropriate spill kits must be available wherever hazardous substances are used.

394. Hazardous substances are stored correctly e.g. in approved hazardous substances storage locations, e.g. lockers or storage units.

Hazardous Substances Register

395. The Contractor/FM Provider must prepare and maintain a *Hazardous Substances Register,* using the template below, listing the Class, substances, volumes and incompatibilities of hazardous substances, their location, and relevant emergency response procedures, and ensure that that information forms part of the *HAZID Register* and the *CSMP Emergency Response Plan (ERP)*.

396. The Hazardous Substances Register must include:

    a. The substances name and UN number (if available) with particular focus on the following hazardous substances classes:
        (1) 2.1.1A and 2.1.1B, 2.1.2A
        (2) Class 3 flammable Liquids. E.g. petroleum, turps, methylated spirits, etc.
        (3) 5.1.2A
        (4) 6.1A, 6.1B, and 6.1C
        (5) 8.1A, 8.2A and 8.3A
        (6) 9.1A, 9.2A, 9.3A, and 9.4A
        (7) Non-flammable, non-toxic compressed gas, e.g. compressed air, Argon, Nitrogen, , Carbon Dioxide);
    b. The maximum quantity permitted and likely to be at the workplace;
    c. The substance's specific location on the worksite;
    d. Any special transport, storage and incompatibility requirements, and how the Contractor/FM Provider has addressed those requirements at the worksite;
    e. Emergency response plan to follow in the incident of a spill or other accident;
    f. Maintaining an up-to-date Register of Safety Data Sheets (SDS) for each hazardous substance on site, that is available within ten minutes of requesting; and
    g. Any hazardous waste generated and stored on site, as well as the disposal method.

397. The Contractor/FM Provider must apply manufacturer instructions and good industry practice in the safe storage, labelling, handling, use and disposal of hazardous substances.

398. Labelling of all containers (including those used for waste products) must clearly name of the substance contained and the safety and risk information associated with the chemical or substance.

399. Copies of the current Safety Data Sheets for all hazardous substances on-site must be readily available at all times.

Hazardous Substances Worksite Storage

400. The Contractor/FM Provider must get approval for proposed hazardous substances storage facilities by the camp or base Hazardous Substances Advisor and/or respective Service Hazardous Substances Prime Delegate prior to storing hazardous substances in those facilities.

401. The Contractor/FM Provider must ensure that proposed hazardous substance storage facilities are appropriate for the hazardous substances used on the worksite.

402. The Contractor/FM Provider must ensure that hazardous substance storage facilities under their control met NZDF Annual HSNO (Hazardous Substances & New Organisms) audits.

Non-Hazardous Substances Use

403. The Contractor/FM Provider must ensure worker compliance with manufacturer instructions and safe use directives for non-hazardous substances on the worksite.

Hazardous Substance Incident Response

404. The Contractor/FM Provider must prepare for and respond to hazardous substance incidents. That includes:

a. Activating those elements of the worksite's *ERP* relevant to the management and resolution of an accidental or unauthorised release of hazardous substances;
b. Ensuring sufficient resources and appropriately trained personnel to support incident response process; and
c. Implement response measures appropriate to the management and resolution of an accidental or unauthorised release of hazardous substances.

405. The Contractor/FM Provider must ensure:

a. The worksite's *ERP* and associated hazardous substances incident response plans is appropriate to the hazardous substances stored and used on the worksite and is amended when new hazardous substances are added to those in use on the worksite and hazardous substances are removed from the worksite over the course of the project;
b. Sufficient resources and trained personnel are present on the worksite to manage and resolve accidental or unauthorised release of hazardous substances present on the worksite; and
c. Response measures appropriate to the management and resolution of an accidental or unauthorised release of the hazardous substances present on the worksite are prepared and regularly practiced.

Hazardous Substance Incident Reporting

406. The Contractor/FM Provider must report any hazardous substance incidents. That includes:

a. Notifying camp or base/external emergency services should the worksite's hazardous substances management and resolution processes prove inadequate; and
b. Report the incident to the appropriate camp or base authorities and to WorkSafe New Zealand where the incident is Notifiable. The Contractor/FM Provider must keep all documents generated and make them available to DEI when requested.

407. The Contractor/FM Provider must retain all documents generated by an incident for review by DEI when requested.

Secondary Containment

408. The Contractor/FM Provider's secondary containment systems must meet the requirements of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

409. The Contractor/FM Provider must ensure the construction and installation of fit-for-purpose systems on the worksite that are capable of:

a. Containing the hazardous substance;
b. Enabling the safe collection of it;
c. Containing the volumes of hazardous substances stored; and
d. Lasting the duration of storage of hazardous substances stored on the worksite.

AUDIT/INSPECTION

410. The Contractor/FM Provider must regularly inspect hazardous substance storage, use and disposal facilities and processes, including compliance with manufacturer instructions and safe use and disposal directives for non-hazardous substances on the worksite.

411. The camp or base NZDF Approved Handler or Compliance Officer, as required and/or respective Service NZDF Hazardous Substances Prime Delegate must regularly spot-inspect the transport, storage facilities, use and disposal of hazardous substances on the camp or base and audit the Contractor/FM Provider's inspection processes.

REPORTING

412. The Contractor/FM Provider must regularly report on hazardous substance storage, use and disposal facilities and processes inspections to DEI and the OIC Defence Area. The Contractor/FM Provider must ensure that sub- and subordinate contractors are cognisant of the control, management and reporting requirements

413. The Contractor/FM Provider must retain all reports for inspection by DEI when requested.

414. The Contractor/FM Provider must make the results of inspections available to DEI on request.

TEMPLATES

Construction Safety Management Plan (CSMP)
Hazardous Substances Management Plan
Hazardous Substances Application
Hazardous Substances Register
9.1 Chemical Management Inspection Checklist

REFERENCES

Hazardous Substances and New Organisms Act 1996
Health and Safety at Work (Hazardous Substances) Regulations 2017
Working safely with hazardous substances, WorkSafe New Zealand, September 2022
Certified handler requirements, WorkSafe New Zealand, September 2018
Inventory requirements for hazardous substances, WorkSafe New Zealand, November 2017
Health and Safety at Work (Hazardous Substances – Additional and Modified Requirements for Specified Class 6 and 8 Substances) Safe Work Instrument 2017
HSNOCOP 47: Secondary Containment Systems, Environmental Protection Authority, April 2012
New rules for hazardous substances, WorkSafe New Zealand, November 2017
Changes to hazardous substances regulations, WorkSafe New Zealand, November 2017

9.2 Explosives

POLICY

416. Worksite operations using explosives are overseen by NZDF Office of Hazardous Substances Assurance (OHSA), are Notifiable to WorkSafe New Zealand, and require a Permit to Work.

417. The Contractor/FM Provider is responsible for the safe movement, use and storage of construction project, PMP works or maintenance task-related explosives on camp or base worksites.

SPECIFICATIONS

418. Before storing and using explosives, the Contractor/FM Provider must have:

    a. A Location compliance licence/certificate if storing explosives above the threshold limits specified in Schedule 8 of the Health and Safety at Work (Hazardous Substances) Regulation 2017, approved by NZDF Office of Hazardous Substances Assurance (OHSA);
    b. A *Permit to Work* issued by a qualified DEI official setting out the conditions and worksite safety processes required before explosives use may occur;
    c. Ensured that only holders of a Controlled substances license handle and se explosive materials on NZDF worksites; and
    d. An emergency response plan ready to implement in the event of an emergency involving explosives occurring.

INSPECTION/AUDIT

419. The Contractor/FM Provider must regularly inspect:

    a. The Location Compliance Licence/Certificate;
    b. Explosive storage facilities; and
    c. The qualifications of certified handlers.

420. DEI officials must regularly spot-inspect the worksite's explosive storage, use, and disposal processes and audit the Contractor/FM Provider's inspection process and emergency response plan.

REPORTING

421. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATES

9.2 Explosives Controls Inspection Checklist

REFERENCES

Certified handler requirements, WorkSafe New Zealand, September 2018
Health and Safety at Work (Hazardous Substances) Regulations 2017, Part 4 – Certified handlers and supervision and training of workers
Guidelines for the Provision of Facilities and General Safety in the Construction Industry, Occupational Safety and Health Service and Department of Labour, October 1995
Licensing requirements for Class 1 explosives, WorkSafe New Zealand, September 2023

9.3 Transportation - Dangerous Goods

POLICY

422. The Contractor/FM Provider must apply the Land Transport Rule: Dangerous Goods 2005 Rule 45001/2005 when transporting dangerous goods in and out of camps and bases.

423. The Contractor/FM Provider must ensure that dangerous goods are:

    a. Transported in and out of the camp or base safely;
    b. Unloaded safely; and
    c. Securely packaged (and the packages do not represent a hazard).

SPECIFICATIONS

424. The Contractor/FM Provider must seek approval, using the camp and base Dangerous Goods Transport and Storage Form, from the camp or base Hazardous Substances Advisor before transporting dangerous goods to and from a NZDF camp or base.

425. The Contractor/FM Provider must ensure that:

    a. The transportation of dangerous goods complies with the relevant legislation, tertiary instruments and other standards specifying their transport requirements, e.g. Land Transport Rule: Dangerous Goods 2005 Rule;
    b. The volumes of dangerous goods transported onto and off NZDF camps and bases are within the limits set out in the relevant legislation, rules and standards;
    c. Dangerous goods packaging must be clearly labelled and marked with at least the UN number, the proper shipping name, special marks if applicable, and dangerous goods class and division and the packaging or containers must be appropriate for the nature and quantities being transported, and they must be appropriately segregated from other goods during transport.
    d. Emergency equipment and information about emergency procedures is readily available to the driver and other relevant workers or emergency services;
    e. Emergency information must be displayed as required;
    f. The dangerous goods documentation must:
        (1) Identify the dangerous goods, the numbers and types of packages or containers, and the total volumes being transported;
        (2) The hazard the dangerous goods represent to people, property and the environment;
        (3) Carry the relevant consignor and other required information;
        (4) Be in English, legible, and readily identifiable as a dangerous goods document; and
        (5) Be readily available during transport and held in a folder clearly marked with the words 'Dangerous Goods Documents' or similar.
        (6) Vehicles moving dangerous goods must display the necessary placards and special marks as required and have an appropriately amended load plan showing the location of all dangerous goods on the vehicle; and
        (7) Drivers of vehicles transporting dangerous goods must:
            (a) Carry emergency response information for all dangerous goods carried on the vehicle in a readily accessible location;
            (b) Apply the correct procedures for safe loading, handling and storage on the vehicle; and
            (c) Be aware of the emergency procedures stated in the emergency response information.

AUDIT/INSPECTION

426. The Contractor/FM Provider must regularly inspect dangerous goods being transported to and from the worksite with a particular focus on:

a. Vehicle safety and fitness for purpose;
b. Driver awareness of safety procedures and requirements;
c. Correct documentation and labelling;
d. Safety of packaging and containers; and
e. Capability to deal with an emergency.

427. DEI officials will regularly perform spot-inspections on dangerous goods transportation and audit the Contractor/FM Provider's inspection processes.

REPORTING

428. The Contractor/FM Provider must make the results of the inspections available to DEI and/or the camp or base Hazardous Substances Adviser on request.

TEMPLATES

9.3 Dangerous Goods (DG) Transportation Inspection Checklist

REFERENCES

Land Transport Rule: Dangerous Goods 2005 Rule 45001/2005
NZS 5433:2019 Set - Transport of dangerous goods on land
AS/NZS 3833:2007 – The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers
AS/NZS 4681:2000 – The storage and handling of Class 9 (miscellaneous) dangerous goods and articles
AS/NZS 5026:2012 – The storage and handling of Class 4 dangerous goods
BS EN 14564:2019 – Tanks for transport of dangerous goods. Terminology
ISO 13274:2013 – Packaging – Transport packaging for dangerous goods – Plastics compatibility testing for packaging and IBCs
ISO 16103:2005 – Packaging – Transport packaging for dangerous goods – Recycled plastics material
ISO 16106:2020 –Transport packages for dangerous goods – Dangerous goods packagings, intermediate bulk containers (IBCs) and large packaging – Guidelines for the application of ISO 9001
ISO 16495:2022 – Packaging - Transport packaging for dangerous goods – Test methods
SAA/SNZ HB 76:2010 – Dangerous goods – Initial emergency response guide
SAA/SNZ HB 95:1998 – Dangerous goods – Glossary of terms
SNZ HB 77:2008 – Guide for the packing and transport of dangerous goods in transport units

9.4 Volatile Fuel Storage

POLICY

429. The Contractor/FM Provider is responsible for the safe transport, storage, handling, use and disposal of project-related volatile liquid fuels.

SPECIFICATIONS

Diesel

430. The Contractor/FM Provider must ensure that diesel storage facilities on the worksite meet or exceed the requirements for stationary container systems and have a current *Stationary Container System Compliance Certificate* for volumes exceeding 5000 litres. The certificate is required for tanks attached or used in connection with oil burning installations or internal combustion engines, e.g. a generator, for which the threshold is 60 litres or higher.

431. The Contractor/FM Provider must ensure that diesel stored in drums or other containers in volumes below that requiring a *Stationary Container System Compliance Certificate* are not exposed to direct heat. Examples include hot work on a storage tank or container may only occur after it has been emptying and purging of diesel vapour, or in places (such as inside metal structures) where internal temperatures could exceed the diesel flash point.

432. Storage sites must not be vulnerable to collision by vehicles, and workers must be able to confine leaks and spills to the vicinity of the drum to enable quick cleaning and to lessen the slipping risk. Workers must also handle containers safely when refilling or dispensing diesel.

433. The Contractor/FM Provider may store diesel in a store in a building, but the building must have an appropriate fire resistance rating and the quantities must be limited to the package size.

434. One or more fire extinguishers of a suitable size must be present and ready for use and/or there is a hydrant system incorporating a 20mm diameter hose, fitted with a spray nozzle and of sufficient length to enable water to be directed to all sides of the system's tanks or tanks.

Petrol and Two-Stroke Fuel

435. The Contractor/FM Provider must ensure that volatile fuel stores storing more than 50 litres of petrol or two-stroke fuels have a *location compliance certificate* confirming that the petrol or two-stroke fuel mixes is stored safely. The Contractor/FM Provider must also ensure that:

a. Petrol and two-stroke fuel is stored in compliance with hazardous substance legislation;
b. There is no naked flames or ignition sources in the vicinity of petrol or two-stoke fuel mixes;
c. There is no smoking within 20 metres of petrol or two-stoke fuel mixes;
d. Workers allow petrol or two-stroke engines ten minutes to cool before refuelling;
e. Workers only use approved petrol or two-stroke containers;
f. Workers do not leave petrol or two-stoke fuel mixes containers in direct sunlight, or in structures where the internal temperature is liable to rise to unsafe levels;
g. Workers use a pouring spout or funnel to decant (pour) from a container into a vehicle or other petrol using device or equipment in the open air;
h. Workers change clothing splashed with petrol or Two-Stoke fuel mixes; and
i. One or more fire extinguishers of a suitable size must be present and ready for use and/or there is a hydrant system incorporating a 20mm diameter hose, fitted with a spray nozzle and of sufficient length to enable water to be directed to all sides of the system's tanks or tanks.

INSPECTION/AUDIT

436. The Contractor/FM Provider must regularly inspect volatile fuel stores and fuel usage on the worksite to ensure they comply with legislation, approved codes of practice and other applicable safety instructions and guidelines.

437. DEI officials will regularly spot inspect fuel transport, storage and use on the worksite and audit the Contractor/FM Provider's inspection processes.

REPORTING

438. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATES

9.4 Volatile Fuel Storage Inspection Checklist
Hazardous Substances Register

REFERENCES

Certifying stationary container systems, WorkSafe New Zealand, May 2018
Code of Practice for the Design, Installation and Operation of Underground Petroleum Storage Systems, Occupational Safety and Health Service, Department of Labour, 1992
Code of Practice for the Design, Installation and Operation of Underground Petroleum Storage Systems, Supplement No. 1, Management of Existing Underground Petroleum Storage Systems, Occupational Safety and Health Service, Department of Labour, 1992
Health and Safety at Work (Hazardous Substances – Above Ground Stationary Tanks Connected to a Generator Set) Safe Work Instrument 2017
Health and Safety at Work (Hazardous Substances – Design and Construction of Above Ground Stationary Tank to ULC-ORD-C80.1-2000) Safe Work Instrument 2017, WorkSafe New Zealand, November 2017
Health and Safety at Work (Hazardous Substances – Filling of Below Ground Stationary Tanks by Pumping) Safe Work Instrument 2017
Health and Safety at Work (Hazardous Substances – Markings for Pipework Connected to Above Ground Stationary Tanks) Safe Work Instrument 2017, WorkSafe New Zealand, December 2017
Health and Safety at Work (Hazardous Substances-Polyethylene above Ground Stationary Tanks for Diesel Fuel) Safe Work Instrument, WorkSafe New Zealand, December 2017
Health and Safety at Work (Hazardous Substances-Reduced Secondary Containment for Certain Above Ground Stationary Tanks) Safe Work Instrument 2017, WorkSafe New Zealand, December 2017
Part 17 Health and Safety at Work (Hazardous Substances) Regulations 2017
Secondary Containment Systems – HSNOCOP 47, Environmental Protection Authority, April 2012

10 WORKER COMPETENCY & WELFARE

INTRODUCTION

439. The health and safety of project workers are the primary focus of worksite risk control measures, and NZDF requires the Contractor/FM Provider to take all reasonably practicable measures to ensure worker physical and mental health and safety on the worksite.

440. That includes ensuring that workers have the necessary quantity and quality of:

a. Training and experience;
b. Supervision;
c. Instruction;
d. Worker Engagement & Participation processes;
e. Impairment prevention measures;
f. Lone worker management;
g. Noise control and respirable hazard management measures;
h. Protective equipment;
i. Worksite worker welfare amenities, facilities and accommodation;
j. Off-site accommodation;
k. Anti-discrimination, anti-harassment and anti-bullying measures;
l. Confidential Disclosure processes; and
m. Processes aimed at improving the mental health of workers, and reducing the potential for worker suicide.

10.1 Worker Competency, Training & Prequalification

POLICY

441. The Contractor/FM Provider must ensure that worksite workers can supply proof of their training and competency to perform their tasks.

SPECIFICATIONS

442. The Contractor/FM Provider must ensure that all workers hold and display a Site Safety Card (or DEI Health and Safety approved equivalent) relevant to their trade type/job description and the work they are undertaking on their site. For example, a site supervisor must hold a Leadership Site Safety Card, , while technical specialists must hold a relevant Technical Site Safety Card.

443. The Contractor/FM Provider must ensure:

    a. Workers on NZDF work sites provide certified proof of their training and/or competency when required (including Verification of Competence and Authority to Operate certification issued by recognised testing entities); and
    b. Copies of workers' certificates and other proofs of competence are available for inspection when requested.

444. The Contractor/FM Provider must:

    a. Establish and maintain a Training and Competency Register to collect and store details of all project workers pre-qualifications, training and competency;
    b. Ensure the accuracy of the Register information (using certified third party verifiers if required) provided by workers before beginning work on the work site; and
    c. Identify health and safety representatives (HSR) in the Training and Competency Register.

INSPECTION/AUDIT

445. The Contractor/FM Provider must inspect worker compliance with these specifications quarterly.

446. DEI officials will regularly spot-inspect the Training and Competency Register and worker compliance with the specifications, and audit the Contractor/FM Provider's inspection processes.

REPORTING

447. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATES

4.9 Training and Competency Inspection Checklist
Training and Competency Register

REFERENCES

10.2 Worker Engagement & Participation

POLICY

448. The Contractor/FM Provider must ensure it supports worker engagement, participation and representation processes on worksite/s or the camp or base that comply with Part 3 of the *Health and Safety at Work Act 2015,* so far as it is reasonably practicable[5]*,* including:

a. Supporting the establishment and operation of a Health and Safety Committee representing all workers on the worksite/s or the camp or base;
b. Ensuring workers effectively participate in designing and operating worksite health and safety processes;
c. Ensuring workers can raise health and safety concerns at any time;
d. Ensuring workers effectively contribute to decisions affecting worksite health and safety;
e. Fostering a no-fault culture;
f. Ensuring health and safety representatives do not act as advisers;
g. Worksite health and safety representatives (preferably elected representatives) attend monthly health and safety committee meetings;
h. Scheduling regular Prestart Meetings and notifying workers in good time of their dates and times; and
i. Ensuring the Pre-Start meetings provide consistent content and message to workers across the worksite in a readily understandable form.

SPECIFICATIONS

Health and Safety Representatives (HSR)

449. The Contractor/FM Provider must establish worker engagement, participation and representation practices as soon as is practicable after work commences at the worksite/s or the camp or base. That includes:

a. Ensuring the election of health and safety representatives by worksite workers;
b. Ensuring elected health and safety representatives hold Unit Standard 29315;
c. Establishing a worksite health and safety committee (in accordance with Part 3 of the *Health and Safety at Work Act 2015*; and
d. Establishing a number of work groups compatible to the activities on the worksite.

450. The Contractor/FM Provider must:

a. Notify DEI of the:
   (1) Establishment of the worksite health and safety committee; and the
   (2) Election of suitably trained health and safety representatives, and their contact details and worksite duties.
   (3) Ensure the health and safety representatives can attend the monthly health and safety oversight committee meetings.

Prestart Meetings

451. The Contractor/FM Provider must ensure Pre-Start Meeting content covers:

a. Current and planned worksite activity;

[5] For Contractor and FM Providers engaging sub- and subordinate contractors for short-term tasks that limit opportunities for those workers to participate in CAPEX Contractor worksite or FM Provider camp and base health and safety committee activities, the Contractor or FM Provider must assess whether the sub- or subordinate contractor has implemented and supports practices that comply with Part 3 of the Health and Safety at Work Act 2015 and the Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016, and report the results of those assessments to DEI on request.

b. News/details of worksite incidents;
c. Worksite hazard information;
d. Contractor/FM Provider company information;
e. SIMOPS information;
f. DEI information, advice, and news; and
g. camp or base daily notices.

452. The Contractor/FM Provider must notify DEI of the times, dates and locations of worksite pre-start meetings.

AUDIT/INSPECTION

453. The Contractor/FM Provider must regularly review worker engagement, participation and representation processes to determine whether they meet the requirements of Part 3 of the *Health and Safety at Work Act 2015.*

454. DEI will regularly:

a. Attend the monthly health and safety representative committee meetings;
b. Assess the effectiveness of worker engagement and participation processes;
c. Attend pre-task briefings, and scoring them in the pre-task briefing audit form;
d. Ensure elected worksite health and safety representatives (HSR) hold Unit Standard 29315;
e. Audit the Contractor/FM Provider's review process; and
f. Audit the Contractor/FM Provider's compliance with Part 3 of the *Health and Safety at Work Act 2015,* and notify the Contractor/FM Provider of any issues that arise, and issue a Non-Conformance Notice as required.

REPORTING

455. The Contractor/FM Provider must make the regular review results available to DEI on request.

TEMPLATES

10.2 Workers and Equipment Inspection Checklist

REFERENCES

Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016
Health and Safety at Work Act 2015, Part 3, Worker engagement, participation, and representation,
Tikanga approach to health and safety builds a stronger business, WorkSafe New Zealand, April 2017
Worker engagement, participation and representation, WorkSafe New Zealand, September 2023
Worker engagement, participation and representation, WorkSafe New Zealand, July 2023
Health and Safety Representatives and Committees, Guidance on the Legislative Requirements, WorkSafe New Zealand, September 2023

10.3 Amenities, Facilities & Accommodation

POLICY

456. The Contractor/FM Provider is responsible for providing worksite workers with amenities, facilities and accommodations, so far as is reasonably practicable, that ensure that workers have access to washing facilities, toilets, drinking water, and weatherproof accommodation suitable for breaks and meals, changing, and drying clothes.

457. Where the work does not require the Contractor/FM Provider to do so the Contractor/FM Provider's workers may use relevant NZDF facilities, subject to DEI or the FM Provider's written approval.

SPECIFICATIONS

458. The Contractor/FM Provider must supply, so far as is reasonably practicable:

a. Sufficient and fit-for-purpose washing facilities such as sinks, suitable cleansing agents and towels. Where required, a shower for cleaning potentially hazardous substances must be part of the first aid facility on the worksite;

b. Sufficient lockable and private toilet facilities to meet the needs of worksite workers of any gender identity, including the provision of sanitary towel disposal facilities (approximately one for every 25 workers), and ensuring they are regularly cleaned, maintained and fit-for-purpose;

c. Portable drinking water to all workers on the site, and the recycling of used drinking water bottles. The Contractor/FM Provider should supply reusable water bottles and cups where possible;

d. Adequate and comfortable weatherproof facility for workers to take their meals, spend rest periods and shelter from bad weather. The facility must:

(1) Be physically distinct from the immediate location of work on the worksite;

(2) Be large enough to house all the workers;

(3) Be capable of seating all the workers at tables with other furniture and equipment necessary to take meals in reasonable comfort and security;

(4) Be equipped with necessary kitchen facilities to enable water boiling, rubbish collection and removal and private changing spaces;

(5) Be draught free, ventilated by fresh or filtered air, and temperature controlled (16-21°C for areas involving physical work, 18-20°C for areas involving semi-sedentary work, and 20-24°C for areas involving sedentary work); and

(6) Provide facilities to enable pregnant women and nursing mothers to rest, where required.

AUDIT/INSPECTION

459. The Contractor/FM Provider must regularly inspect workers welfare amenities and facilities to ensure they meet worker needs, and remedy any deficiencies and/or make any repairs immediately.

460. DEI will regularly spot-inspect the workers welfare amenities and facilities and audit the Contractor/FM Provider's inspection processes.

REPORTING

461. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATE

10.3 Worker Facilities Inspection Checklist

REFERENCE

Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
Workplace and facilities requirements, WorkSafe New Zealand, August 2018

10.4 Off-Site Accommodation

POLICY

462. The Contractor/FM Provider must make every effort to ensure that off-site rented worker accommodation complies with NZ housing and rental legislation and standards, (e.g. Section 36 of the *Health and Safety at Work Act 2015*, and the *Residential Tenancies (Healthy Homes Standards) Regulations 2019*).

463. It is recommended that the Contractor/FM Provider apply 3rd party rental accommodation evaluation programmes that determine whether rental accommodation meets the requirements of NZ housing and rental legislation and standards.

REFERENCES

Bylaws made pursuant to the Local Government Act 2002 in relation to approved forms of heating on a local council level
Bylaws made under the Local Government Act 2002
Health Act 1956 Section 120C Regulations as to housing improvement and overcrowding
Healthy Homes Guarantees Act 2017
Housing Improvement Regulations 1947
Residential Tenancies (Healthy Home Standards) Regulations 2019
Residential Tenancies (Smoke Alarms and Insulation) Regulations 2016

10.5 Discrimination, Harassment & Bullying

POLICY

464. The Contractor/FM Provider must take all practicable and reasonable action to ensure the worksite is free from any form of discrimination, harassment, bullying or other offensive behaviour. That includes:

a. Intervening if discrimination, harassment or bullying is observed;
b. Establishing and implementing a complaints investigation and resolution process;
c. Ensure that all workers are aware of the policy as well as implementing equity, discrimination, harassment or bullying awareness training;
d. Ensure workers have access to the Discrimination, Harassment and Bullying Complaint Form;
e. Maintain an environment where complaints, respondents and witnesses are confident they will be supported by their superiors; and
f. Ensure reporting of all legitimate incidents of discrimination, harassment and bullying to DEI.

465. The Contractor/FM Provider must notify DEI in the event of discrimination, harassment, bullying or other offensive behaviour involving NZDF members as the respondents. Where workers are engaging in that behaviour towards NZDF members, the relevant commanding officer will notify DEI who will in turn notify the Contractor/FM Provider.

466. Where NZDF members are the complainants or the respondents the NZDF commanding officers will liaise with DEI and the Contractor/FM Provider to engage in resolution action. NZDF will follow its internal processes in resolving behaviour by NZDF respondents, while the Contractor/FM Provider will follow the processes set out below for worker respondents.

467. To ensure a resolution which is delivers an fair and just outcome for the complainant/s and respondent/s, the NZDF commanding officer and the Contractor/FM Provider will work together to achieve that outcome.

SPECIFICATIONS

468. The Contractor/FM Provider will establish and implement policy and processes that will:

a. Define discrimination, harassment, bullying or other inappropriate behaviour;
b. Explain potential outcomes for persons engaging in that behaviour;
c. Provide support to assist workers with discrimination, harassment and bullying issues; and
d. Provide a framework and procedures enabling sensitive, impartial, thorough and timely management and resolution of all incidents of discrimination, harassment, bullying or other inappropriate behaviour.

469. The framework and procedures will enable:

a. A confidential complaint process;
b. A good faith investigative process which enables a thorough and timely investigation and also preserves the privacy of the complainant/s and the respondent/s;
c. A fair resolution process which ensures justice for the complainant/s and the respondent/s;
d. An outcome process ensuring that outcomes appropriate to the circumstances of the complaint occur; and
e. Notification of any activity adjudged criminal in nature to the NZ Police for further action.

470. When the complaint is resolved, within the bounds of the *Privacy Act 1993* the Contractor/FM Provider will advise DEI of the:

a. Summary of the complaint (while preserving the privacy of those persons involved in the complaint);
b. Support provided to the complainant/s;
c. Investigative process taken;
d. Resolution actions taken;
e. Outcomes; and
f. Referral of the matter to NZ Police.

AUDIT/INSPECTION

471. The Contractor/FM Provider must regularly inspect the worksite for discriminatory, harassing and bullying behaviour, and regularly review the effectiveness of the complaint and resolution process.

472. DEI spot-inspect the worksite for discriminatory, harassing and bullying behaviour, and audit the Contractor/FM Provider's inspection and review processes.

REPORTING

473. The Contractor/FM Provider must make the inspection and review results available to DEI on request.

TEMPLATES

REFERENCES

Bullying at Work: Advice for Workers, WorkSafe New Zealand, February 2017
Employment Relations Act 2000, Part 9, Personal grievances,, disputes and enforcement
Good practice guidelines - Preventing and responding to bullying at work, WorkSafe New Zealand, March 2017
Human Rights Act 1993, Parts 1A and 2
Preventing and responding to sexual harassment at work – advice for businesses, WorkSafe New Zealand, September 2018
Sexual harassment – advice for workers, WorkSafe New Zealand, September 2018

10.6 Protected Disclosures

POLICY

474. Any person involved in a NZDF project may make protected complaints or information disclosures to NZDF about any aspect of project activities where the complainant believes serious wrongdoing is occurring or is about to occur.

475. Pursuant to Section 25 (1) of the *Protected Disclosures (Protection of Whistleblowers) Act 2022,* the Chief of the Defence Force is an 'appropriate authority' for the purposes of the Act. That means that workers or PCBU officers associated with a DEI project wishing to make a protected disclosure about matters pertaining to the project may do so directly to the Chief of Defence Force via the NZDF Protected Disclosures System.

476. The system enables protected disclosure of matters that are true or reasonably believed to be true, about any serious wrongdoing, consisting of:

    a. Unlawful, corrupt, or irregular use of public funds or public resources; or
    b. Any act, omission, or course of conduct that constitutes a serious risk to public health or public safety or the environment; or
    c. Any act, omission, or course of conduct that constitutes a serious risk to the maintenance of law, including the prevention, investigation, and detection of offences and the right to a fair trial; or
    d. Any act, omission, or course of conduct that constitutes an offence; or
    e. Any act, omission or course of conduct by a public official that is oppressive, improperly discriminatory, or grossly negligent, or that constitutes gross mismanagement.

477. DEI will notify the Contractor/FM Provider of the processes and procedures of the Protected Disclosures System, e.g. dedicated phone number, email or online app or anonymous complaint box or any other means ensuring confidentiality of protected disclosures.

SPECIFICATIONS

478. The Contractor/FM Provider must participate in and promote NZDF's Protected Disclosures System by regularly notifying workers of the purpose and use of the DEI Protected Disclosures System.

479. The Contractor/FM Provider must:

    a. Notify the worksite workers and the other PCBUs of the existence of the protected disclosure system during worksite inductions;
    b. Explain how the protected disclosure system works; and
    c. Explain how the protections apply to PCBUs and their workers.

AUDIT/INSPECTION

480. DEI will audit the Contractor/FM Provider's promotion of the system during worksite inductions.

REPORTING

481. The Contractor/FM Provider must make the review results available to DEI on request.

TEMPLATES

REFERENCES

Protected Disclosures(Protection of Whistleblowers) Act 2022
Te Ture Whakahaumaru I te Whākinga 2022 Protected Disclosures (Protection of Whistleblowers) Act 2022 – Guidance – Public Services Commission

10.7 Worker Mental Health and Wellbeing Employee Assistance Programme

POLICY

Purpose

482. The Contractor/FM Provider must establish and implement a continual improvement focused mental health and wellbeing employee assistance programme on the worksite.

483. The Contractor/FM Provider may:

a. Establish an in-house programme; or

b. Contract with an external programme supplier or complementary set of suppliers that support specific programme elements.

484. In either case, the programme must meet NZDF expectations and achieve the programme KPIs listed below.

Programme Requirements

485. The Contractor/FM Provider must establish and implement an accredited[6] mental health management programme that:

a. Reduces the aspects and impacts of work that may be harmful to the mental health of workers;

b. Promotes those aspects and impacts of work that may have a positive impact on workers' mental health;

c. Provides methods, opportunities and effective means to support early issue identification, intervention, and treatment for workers ;

d. Provides mental health support for workers returning to work; and

e. Provides mental health and suicide prevention literacy and literature to workers.

SPECIFICATIONS

486. The programme must specify:

a. How it has identified and rated the risks of psychosocial hazards[7] on the worksite, and what control measures[8] it applies to mitigate those risks;

b. How it consults workers and integrates their views into the programme;

c. What reporting methods it applies;

d. What survey and similar information gathering tools it uses Such as complaints, records of hours worked, absenteeism, turnover data and exit interviews and previous psychosocial risk assessments and related material;

e. How it raises mental health risks awareness affecting worksite workers among those workers;

f. The actions taken to build and maintain mental health resilience for worksite workers;

g. How it will ensure:

(1) Worker self-referral to the EAP;

(2) Formal manager referral to the EAP; or

(3) Referral via worker with mental health support training.

h. How it will ensure the programme meets and continues to meet industry mental health support best practice;

i. How it will conduct psychosocial health and safety investigations;

[6] From an NZDF accepted mental health services and employee assistance programme provider.
[7] Such as high physical, mental or cognitive, or emotional demands and poor support or lack or role clarity.
[8] Such as ensuring respectful behaviours and worksite relationships, ensuring sufficient time to complete tasks, and effective support from supervisors and co-workers.

j. How it will review itself and the system and its control measures and find ways to improve them; and

k. That it has the resources to meet those objectives.

487. The programme's KPI's are:

a. Current accreditation from a recognised organisation or organisations supplying training, advice and assistance on the management and operation of worksite mental health support and worker suicide prevention programmes;

b. Mental health, including suicide precursors and prevention, is a discussion point at weekly and monthly H&S meetings;

c. Reporting on mental health issue prevention initiatives planned or operating;

d. Reporting on numbers of worksite workers/worksite management who have scheduled mental health support/suicide prevention training or who have received training (compared to total worksite workforce);

e. Reporting on measures taken to identify and remedy aspects of work that may be harmful to the mental health of workers;

f. Reporting on policies and measures applied to supporting early mental health issue identification, interventions and treatment for workers;

g. Reporting on mental health support measures provided to workers returning to work;

h. Reporting on mental health concerns/events occurring per month – numbers only;

i. Demonstration and examples of management involvement in mental health awareness and suicide prevention initiatives.

AUDIT/INSPECTION

488. The Contractor/FM Provider must regularly review the Programme to ensure it is meeting its objectives.

REPORTING

489. The Contractor/FM Provider must report on the programme's KPI's each month to the project's Project Manager and make the results of its regular Programme reviews available to DEI when requested.

490. The Project Manager will forward the monthly report to the DEI H&S Coordinator for review.

TEMPLATES

REFERENCES

Supporting mentally healthy work, WorkSafe New Zealand, September 2020
Psychosocial hazards in work environments and effective approaches for managing them, WorkSafe New Zealand, April 2019
Mentally healthy work – Good practice guidelines for managing psychosocial risks at work, WorkSafe New Zealand

11 WORKER PROTECTION

INTRODUCTION

491. Project workers are the focus of worksite health and safety measures, and NZDF requires the Contractor/FM Provider to take all reasonably practicable measures to ensure worker health and safety on the worksite.

492. That includes ensuring that workers have the necessary quantity and quality of:

a. Impairment prevention measures;
b. Lone worker management;
c. Noise control;
d. Protective equipment; and
e. Respirable hazard management measures.

11.1 Worker Impairment Prevention

POLICY

493. Alcohol and illicit or illegal drug consumption on NZDF work sites is forbidden. Anyone detected engaging in these activities or who fails drug and alcohol tests is liable to immediate removal from the camp or base with their access privileges revoked temporarily or permanently. Prosecution may also follow.

494. The consumption of tobacco and other combustible substances, heated tobacco products, nicotine vaping & chewing tobacco is strongly discouraged on NZDF camps and bases as they present a danger to people and NZDF infrastructure and assets. The consumption of any of these products may only occur in places designated by the camp or base command.

495. The Contractor/FM Provider is responsible for:

a. Ensuring workers on the worksite are fit for work, and not suffering impairment for any reason sufficient to prevent them from undertaking their duties in a safe and effective manner;

b. Managing worker fatigue and stress.

SPECIFICATIONS

Alcohol and Drug Consumption

496. The Contractor/FM Provider must have a robust and reasonable workplace illicit and illegal drug and alcohol policy and accompanying process which:

a. Clearly states what is acceptable in the workplace and what is not and the consequences of not complying with the policy;

b. Sets out clear procedures for what happens when workers breach the policy and what may happen to the worker and their employment; and

c. Consistently enforces the policy.

497. The Contractor/FM Provider must:

a. Ensure worksite workers are not alcohol or drug impaired;

b. Test involved workers for alcohol and drug consumption/impairment after incidents involving injuries or damage to plant or equipment;

c. Notify DEI of any failed/positive alcohol or drug tests; and

d. Ensure all testing of worker samples must occur at an IANZ accredited laboratory certified for workplace drug testing in accordance with the general requirements of the Australian/New Zealand standard AS/NZS 4308:2008 *Procedures for specimen collection and the detection and quantitation of drugs or abuse in urine.*

Consumption of Tobacco and Other Combustible Substances, Heated Tobacco Products, Nicotine Vaping & Chewing Tobacco

498. The Contractor/FM Provider must ensure the consumption of tobacco and other combustible substances, heated tobacco products, nicotine vaping & chewing tobacco only occurs at those locations designated by the camp or base command, and must ensure that consumers dispose of their wastes safely.

499. The Contractor/FM Provider must also notify all workers that anyone found consuming tobacco and other combustible substances, heated tobacco products, nicotine vaping & chewing tobacco outside the designated consumption areas is liable for immediate removal from the camp or base and their access privileges revoked temporarily or permanently.

Fatigue & Stress

500. The Contractor/FM Provider must prepare and implement a fatigue and stress management policy with supporting processes. The policy and processes must include:

a. Managing shift lengths and shift breaks;
b. Managing work related travel;
c. Assigning management and worker roles and responsibilities, as well as associated training;
d. Reporting fatigue and stress and managing fatigued or stressed workers;
e. Work scheduling that enables workers to have enough time to commute to and from work and to physically and mentally recover for the next day (some NZDF bases are remote from potential worker accommodation, and extensive commuting may be required);
f. Ensuring a variety of tasks for each worker, and reducing or eliminating boring, repetitive, and unfulfilling tasks where possible;
g. Giving workers the opportunity to take responsibility for their tasks, perhaps the order in which tasks occur or the means used to accomplish them, where possible;
h. Avoiding unplanned work, overtime, emergencies, breakdowns and callouts;
i. Providing regular and quality rest breaks during shifts, including a minimum of two paid ten-minute rest breaks and one unpaid 30 minute meal break in work shifts six to eight hours long;
j. Ensuring work in harsh/uncomfortable conditions is minimised as much as possible;
k. Identifying reasonably foreseeable hazards leading to worker fatigue and stress, and applying that list to safety management of the task; and
l. Monitoring and reviewing the policy.

501. Worksite fatigue control measures should also include:

a. Ensuring the correct manning levels of and equipment/machinery to achieve tasks;
b. Eliminating or reducing overtime for high risk tasks;
c. Providing longer breaks during shifts;
d. Providing ventilation and heating to improve alertness;
e. Reducing exposure to hazardous substances;
f. Helping supervisors identify and assess fatigue impairment; and
g. Providing the right PPE for the job.

AUDIT/INSPECTION

502. The Contractor/FM Provider must regularly inspect the worksite to determine compliance with the CHESS specifications.

503. DEI will regularly spot inspect the worksite to determine compliance with the CHESS specifications and will regularly audit the Contractor/FM Provider's inspection processes.

REPORTING

504. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATES

REFERENCES

Fatigue

Fatigue – Advice for Small Business Owners on Managing the Risk of Fatigue at their Workplace, WorkSafe New Zealand, September 2018
Fatigue – Advice for Workers on Managing the Risk of Fatigue at Their Workplace, WorkSafe New Zealand, September 2018
Fatigue, WorkSafe New Zealand, July 2017
Managing the risks of shift work, WorkSafe New Zealand, August 2021
Fatigue prevention in the NZ Workplace, Canterbury Rebuild Safety Forum, October 2015
Healthy Work – Managing stress and fatigue in the workplace, Occupational Safety and Health Service, Department of Labour, 2003
Guide for Managing the Risk of Fatigue at Work, Safe Work Australia, November 2013

Alcohol & Drugs

How to Manage Alcohol and Other Drugs (AOD) in the Workplace, Canterbury Rebuild Safety Charter, https://www.employment.govt.nz/workplace-policies/tests-and-checks/drugs-alcohol-and-work/
Impairment and testing for drugs at work, WorkSafe New Zealand, June 2020
AS/NZS 4760:2019 Procedure for specimen collection and the detection and quantification of drugs in oral fluid
NZS 4308:2008 Procedure for specimen collection and the detection and quantitation of drugs of abuse in urine

11.2 Lone Worker Management

POLICY

505. The Contractor/FM Provider is responsible taking all practicable and reasonable steps to ensure the health and safety of lone workers.

SPECIFICATIONS

506. The Contractor/FM Provider must prepare and implement a *Lone Worker Management* policy and accompanying processes. These must:

    a. Ensure appropriate hazard assessments for the task or tasks;
    b. Identify appropriate precautions;
    c. Ensure the lone worker is advised of relevant health and safety matters applicable to the task and the location where the work is required;
    d. Ensure the worker has the equipment, including PPE, necessary for the task or tasks to be undertaken safely;
    e. Ensure regular checks on the lone worker to confirm that the lone worker is alright and applying the health and safety precautions relevant to the task or tasks and working safely;
    f. Ensure that the lone worker has:
        (1) The requisite fitness, competency and training to perform the work;
        (2) A current first aid certificate;
        (3) A means of communicating with the employing contractor necessary for the safe performance of the task or tasks; and
        (4) The means and training required to activate an emergency response plan if required.
        (5) Notify DEI of lone worker activities requiring permits.

AUDIT/INSPECTION

507. The Contractor/FM Provider must regularly inspect lone worker operations to determine compliance with the policy.

508. DEI will spot-inspect lone worker operations and audit the Contractor/FM Provider's inspection processes.

REPORTING

509. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATES

11.1 Worker Protection Inspection Checklist

REFERENCES

DFI 10.6 Lone Worker Management, NZDF, February 2019
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, Part 2 Good practice guide – Remote Working, Government Health and Safety Lead,
Protecting employees who work alone, Employment New Zealand,
Protecting lone workers – How to manage the risks of working alone, Health and Safety Executive, March 2020
Working alone – Health and safety guidance on the risks of lone working, Health and Safety Executive, May 2013

11.3 Noise

POLICY

510. Workers must not, as far is reasonably practicable, be exposed to noise equivalent to 85 decibels averaged over eight hours, or a peak noise level over 140 decibels.

511. The Contractor/FM Provider is required to reduce noise levels on a worksite, as far as is practicable, through the application of noise control measures designed to:

    a. Eliminate construction noise;
    b. Substitute less noisy processes;
    c. Remove persons from the vicinity of noisy work;
    d. Select quieter equipment; and
    e. Ensure workers and visitors to worksites use appropriate hearing protection when required.

512. Wherever possible the Contractor/FM Provider will separate workers and noisy machinery, and/or use barriers to block the noise, and/or silencers or noise insulated equipment. During noisy tasks, workers exposure to noise should be limited via rotating tasks or shifts. For work shifts exceeding eight hours, a competent person should determine the equivalent noise exposure.

513. Where the Contractor/FM Provider has, so far as is reasonably practical, taken steps to ensure that no worker at the worksite is exposed to noise in excess of that specified above, the Contractor/FM Provider shall clearly communicate, by way of signs, labels, or other appropriate means that worksite noise levels are hazardous or likely to be hazardous and the type of hearing protection suitable to protect against the noise levels.

SPECIFICATIONS

514. The Contractor/FM Provider is responsible for training workers about noise protection systems through inductions and other means ensuring their use whenever noise reaches harmful levels.

515. The Contractor/FM Provider is required to ensure wearing of hearing protection PPE by all workers exposed to noise during the working day.

516. The Contractor/FM Provider must arrange audiometry tests with an occupational health practitioner for all workers exposed to harmful levels of noise, and ensure they take appropriate actions to protect and preserve their hearing.

517. Detailed hearing assessments should occur at least every five years after the more recent assessment and following any workplace change or work process change to which the previous assessment related and activities likely to change the worker's noise exposure such as:

    a. Installation or removal of plant or machinery;
    b. Changes in work type or machine type or activity that causes significant changes to ambient noise levels;
    c. Changes in working environment likely to cause significant changes in noise levels;
    d. Changes in work hours or modifications to working arrangements causing an increase to noise exposure;
    e. Changes to plant or process;
    f. When requested by DEI; and
    g. When reasonably requested by the worker or worker's health and safety representative.

518. The Contractor/FM Provider must:

    a. Monitor work site noise levels in accordance with NZS 6801:2008 Acoustics – Measurement of environmental sound;
    b. Regularly engage a competent person for detailed noise assessments;
    c. Seek workers and camp or base command's views on noise taking into consideration NZS 6802:2008 Acoustics – Environmental noise and consideration NZS 6803:2008 Acoustics – Construction noise; and
    d. Encourage workers to identify any new risks and ways to resolve them; and

e. Regularly record:
   (1) The workers receiving noise protection training;
   (2) Noise control measures taken;
   (3) The results on audiometry tests taken during the preceding month; and
   (4) The results of detailed noise assessments (noting dates, times, locations, activities and type of equipment used) and make that record available on request.

Keep records of all assessments for a period of at least ten years.

AUDIT/INSPECTION

519. The Contractor/FM Provider must regularly inspect the worksite for noise issues and determine worker compliance with noise control measures.

520. DEI will spot-inspect the worksite for noise issues and worker compliance with noise control measures and audit the Contractor/FM Provider's inspection processes.

REPORTING

521. The Contractor/FM Provider must make the inspection results and detailed noise assessments available to DEI on request.

TEMPLATES

11.1 Worker Protection Inspection Checklist

REFERENCES

Health and Safety in Employment Regulations 1995, Regulation 11
Noise, Introduction, WorkSafe New Zealand, August 2018
Supporting Good Hearing Health at Work, WorkSafe New Zealand,
Preventing noise induced hearing loss, WorkSafe New Zealand, June 2016
Hearing Protection, WorkSafe New Zealand, July 2018
How Noisy is your Workplace, WorkSafe New Zealand, September 2018
Legal Duties, WorkSafe New Zealand, July 2018
Noise in Construction, WorkSafe New Zealand, July 2015
Occupational Noise Exposure, Selection and Use of Hearing Protectors, Occupational Safety and Health, October 2003
Supporting Good Hearing Health at Work – PCBU Version, WorkSafe New Zealand, September 2018
Supporting Good Hearing Health at Work – Workers' Version, WorkSafe New Zealand, September 2018
Providing Information, Training, Instruction or Supervision for Workers, WorkSafe New Zealand, July 2016

11.4 Respirable Hazard Management

POLICY

522. The Contractor/FM Provider is responsible for eliminating or mitigating the hazards represented by:

- Respirable crystalline silica (RCS) dust
- Synthetic mineral fibres
- Wood dust
- Solvent, glue, and engine exhaust aerosols and particulates
- Other respirable airborne contaminants

SPECIFICATIONS

523. The Contractor/FM Provider must eliminate or mitigate these hazards through:

a. Identifying and communicating to workers the sources of worksite respirable hazards;
b. Identifying alternative construction methods which eliminate the risk of respirable hazards;
c. Providing specific awareness training to workers on the health effects caused by respirable crystalline silica dust, including tasks and sources thereof, and keeping record of awareness training;
d. Ensuring the provision and regular maintenance of dedicated ventilation systems such as local exhaust ventilation, air cleaning and filtration systems;
e. Hazard removal and mitigation equipment and processes, such as wetting systems (where practicable) and inspecting systems for dust accumulation;
f. Providing health monitoring for their workers, including lung function testing;
g. On-site hazard reduction training; and
h. Training workers to use appropriate PPE equipment.

524. The Contractor/FM Provider must implement a worksite health and safety evaluation process to:

a. Assess the hazards generated by worksite activities;
b. Determine the effectiveness of hazard elimination or mitigation measures; and
c. Identify any additional measures are needed to eliminate or mitigate worksite respirable hazards, including inspecting filters and worker PPE (such as qualitative and quantitative fit tests for workers); and
d. Inspect workers working in locations with respirable hazards are wearing and using hazard removal and mitigation systems correctly, including using prescribed PPE correctly; and
e. Implement any changes required on the worksite to deliver the needed risk control measures and meet the required health and safety standards

INSPECTION/AUDIT

525. The Contractor/FM Provider must regularly inspect the worksite for compliance with CHESS specifications, referring to the checklist listed below for guidance.

526. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below, and regularly audit the Contractor/FM Provider's inspection processes.

REPORTING

527. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

11.1 Worker Protection Inspection Checklist

REFERENCES

Accelerated silicosis, WorkSafe New Zealand, May 2019
Controlling dust with on-tool extraction, WorkSafe New Zealand, September 2022

Controlling silica dust in the workplace/Te kaupare atu I te puehu takawai I te wāhi mahi, WorkSafe, August/Ākuhata 2019
Dusty work and use of controls among construction workers, WorkSafe New Zealand, April 2019
Health and Safety Guidelines for the Selection and Safe Handling of Synthetic Mineral Fibres, Occupational Safety and Health Service, Department of Labour, June 1994
Local Exhaust Ventilation, WorkSafe New Zealand, August 2023
NZS 4303: 1990 Ventilation for acceptable indoor air quality
Personal protective equipment – a guide for workers, WorkSafe New Zealand, September 2018
Silica dust in the workplace/Te puehu takawai I te wāhi mahi, WorkSafe New Zealand, September 2019
Wood dust: Controlling the Risks, WorkSafe Fact Sheet, January 2023
Workplace Exposure Standards and Biological Exposure Indices, WorkSafe New Zealand, November 2023
AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment
Health information for PCBUs of workers in the engineered stone industry, WorkSafe New Zealand, August 2020
Ngā korero hauora mā ngā Tāngata Whakahaere Umanga mahi rānei (PCBU) o te ahumahi kōhatu pūhanga, Mahi Haumaru Aotearoa (WorkSAfe New Zealand?, September 2020

11.5 Personal Protective Equipment/Environmental Modification Equipment

POLICY

528. The Contractor/FM Provider is responsible for ensuring that all workers on the worksite wear high visibility apparel, eye, hearing, and head, body and foot protection suitable to the working conditions.

529. The Contractor/FM Provider must ensure that no worker on the worksite is levied or charged for anything done, or provided, in relation to safety and health (*Section 27 - Health and Safety at Work Act 2015*), including the supply of personal protective equipment.

SPECIFICATIONS

Environmental Modification

530. The Contractor/FM Provider must ensure, where practicable, the resources and processes necessary to enable workers to manage difficult environmental conditions, such as, but not confined to:

a. Readily accessible potable water supply;
b. Fans and cooling apparatus;
c. Heaters and warming apparatus; and
d. Shelter from weather conditions.

Personal Protective Equipment

531. The Contractor/FM Provider must ensure that all workers and visitors on NZDF work sites:

a. Are supplied with appropriate personal protective equipment;
b. Trained in the use of that personal protective equipment; and
c. Use that equipment when appropriate.

532. That includes, but is not restricted to:

a. A hard hat or safety helmet compliant with AS/NZS 1800 or other appropriate standard;
b. Safety shoes or boots compliant with AS/NZS 2210.1 or other appropriate standard and are ankle supporting, lace up boots only (unless alternative footwear required for specific tasks, e.g. asbestos removal);
c. Close-fitting overalls or protective clothing appropriate to the activity;
d. Close-fitting gloves appropriate for the work being undertaken;
e. Hearing and eye protection;
f. High visibility wet weather clothing;
g. Specialist equipment suitable for the work carried out, e.g. asbestos removal work;
h. Ultraviolet protection, including suitable sunscreen, hat, and clothing;
i. Cooling and warming clothing and apparatus (e.g. cooling vests) so as far as is practicable;
j. High-visibility clothing maintained in a clean and tidy condition and labelled with the employer's logo (where appropriate); and
k. Fit tested respiratory equipment (supplied-air respirators and air-purifying respirators) suitable for the workplace and hazards.

AUDIT/INSPECTION

533. The Contractor/FM Provider must regularly inspect worker protective equipment to ensure:

a. It meets these specifications and the relevant standards; and
b. Workers use PPE correctly and in its intended manner.

534. DEI will regularly undertake spot inspections of the worksite to ensure the use of appropriate environmental modification and correct PPE and audit the Contractor/FM Provider's inspection processes.

REPORTING

535. The Contractor/FM Provider must provide inspection reports to DEI on request.

TEMPLATES

10.2 Workers and Equipment Inspection Checklist

REFERENCES

Keeping safe in the sun, WorkSafe New Zealand, March 2018
Managing the risks of working in heat, Guidance Material, Safe Work Australia, October 2021
PAS 10412:2015 Intelligent clothing. LED active high visibility clothing. Specification
Personal protective equipment – a guide for businesses, WorkSafe, August 2018
Personal protective equipment – a guide for workers, WorkSafe New Zealand, September 2018
Protecting workers from solar UV radiation, WorkSafe New Zealand*, January 2018*
Protecting your workers' eyes, WorkSafe New Zealand*, October 2018*

11.6 Respiratory Protective Equipment

POLICY

536. The Contractor/FM Provider is responsible for the effective and safe use of respiratory protective equipment (RPE) on the worksite.

SPECIFICATIONS

Filtered Breathing Apparatus

537. The Contractor/FM Provider must ensure that:

a. Workers using filtered breathing apparatus are:

(1) Trained in their effective use;

(2) Clean-shaven[9] (to ensure an effective seal and prevent breathing in harmful materials such as asbestos, lead paint dust, or silica) or provided with an alternative RPE that doesn't require a tight fit; and

(3) Provided with regular health monitoring.

b. Filtered breathing apparatus (including non-powered and powered air purifying respirators) used on the worksite are:

(1) Fit-for-purpose;

(2) Properly fitted and fit-tested as required;

(3) Cleaned, maintained and stored in accordance with the manufacturer instructions;

(4) Inspected before use; and

(5) Positive and negative pressure checked before use.

Self-Contained Breathing Apparatus

538. The Contractor/FM Provider must ensure that workers using self-contained breathing apparatus for a specific task have:

a. Notified WorkSafe New Zealand in the case of self-contained breathing apparatus;

b. Prepared a Job Safety Analysis for the task;

c. Obtained a *Permit to Work* for the task, which must include any other notifiable or permitable activities associated with the task;

d. Ensured that ingress and egress into the place with the non-respirable atmosphere is adequate for people wearing self-contained breathing apparatus;

e. Selected and equipped a suitably trained Safety Observer/task supervisor to control activity in a confined space or other location with a non-respirable atmosphere;

f. Implemented suitable risk control measures including:

(1) Ensuring all workers involved in the task are trained and competent in the use of self-contained breathing apparatus and are using PPE appropriate to the task;

(2) Implementing a fit-for-purpose worker monitoring and communication system;

(3) Ensuring all equipment, machinery and plant used for the task, such as masks, air tanks, air compressors and hoses has been maintained, tested, certified and/or tagged as required, and is fit for purpose; and

(4) Prepared and tested an emergency/rescue plan and ensured the workers have the training and the equipment necessary to implement it.

[9] WorkSafe New Zealand notes in *Respiratory protective equipment – advice for workers*, that 'Facial hair and stubble (even one day's growth) make it almost impossible to get a good seal between your face and RPE. If you have a beard, you should talk to your PCBU about other forms of RPE that do not rely on a tight face fit.'

AUDIT/INSPECTION

539. The Contractor/FM Provider must regularly inspect the worksite for compliance with CHESS specifications, referring to the checklist listed below for guidance.

540. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below.

REPORTING

541. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

11.6 Respiratory Equipment Inspection Checklist

REFERENCES

Health and Safety at Work (Hazardous Substances) Regulations 2017
Respiratory protective equipment – advice for businesses, WorkSafe New Zealand, December 2020
Respiratory protective equipment – advice for workers, WorkSafe New Zealand, July 2020
AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment
AS/NZS 1716: 2012 Respiratory protective devices

12 WHEN THINGS GO WRONG

542. Effective preparation for a worksite emergency is a key feature of CSMP/FMSMP and the Contractor/FM Provider must ensure that the worksite's emergency response plan is fit-for-purpose and properly resourced.

543. That includes ensuring first aid personnel and resources are available on the worksite and a process in in place for accessing emergency services.

544. This section outlines the minimum requirements for emergency management that the Contractor/FM Provider must maintain as part of the CSMP/FMSMP.

12.1 Worksite Emergency Response Plan

POLICY

545. The Contractor/FM Provider must prepare an Emergency Response Plan (ERP) for the worksite. Its purpose is to:

a. Prepare responses to accidents and incidents; and

b. Ensure the provision of human and other resources necessary to implement those responses.

546. The Contractor/FM Provider must scale the Emergency Response Plan to the size of the construction project, PMP works or maintenance task. The Emergency Response Plan for a six-worker job is going to be a lot less involved than that required for a 600-worker construction project.

547. There are a few irreducible elements. They are:

a. There has to be an Emergency Response Plan;

b. The workers need training for an emergency;

c. The workers need leadership during an emergency;

d. First aid responses and the people trained to provide it and the necessary resources must be available;

e. There has to be an evacuation plan; and

f. The workforce needs the resources to execute the Emergency Response Plan.

SPECIFICATIONS

548. The Contractor/FM Provider must create an Emergency Response Plan. It will:

a. Use the HAZID Analysis Register/FM Risk Register to determining potential accident/incident scenarios related to the construction project, PMP works, or maintenance task's hazards and risks;

b. Align with the camp or base emergency plan, including adopting instructions from the camp or base for evacuation routes and assembly points from the camp or base health and safety plan;

c. Enable notification of the relevant emergency services, both those available on the camp or base and services external to the camp or base and include the proximity and response times applicable to those emergency service organisations;

d. Take into account relevant laws and NZDF, local authority, regional authority, and national level emergency response plans;

e. Enable communication capability on the worksite that enables the implementation of the Emergency Response Plan;

f. Enable safe evacuation of the worksite based on the potential hazards present on the worksite, including, in conjunction with the camp or base health and safety plan, evacuation routes and assembly points;

g. Identify worksite hazards and prepare processes and procedures to deal with emergencies resulting from those worksite hazards;

h. Include emergency procedures and resources based on the emergency type e.g. natural disasters, fire, explosion, medical emergency, rescues, hazardous chemical incidents, armed confrontations, and bomb threats;

i. Include a worksite evacuation and/or cordoning plan relevant to the various potential hazards, and ensuring all workers are familiar with how to evacuate the site, where they are to assemble after evacuating the work site, determining if anyone is missing, and how to manage casualties resulting from any incident;

j. Include appropriate rescue plans for incidents involving trapped workers and high-risk tasks such as *Confined Spaces, Working at Heights, Diving* and others where appropriate; and

k. Be applicable to after-hours workers; and

l. Include a site map indicating:

(1) Fire extinguishers;

(2) Wash stations;

(3) Defibrillators;
(4) First aid kits;
(5) Showers;
(6) Assembly area; and
(7) Any other relevant emergency equipment or details.

549. The Contractor/FM Provider must:

a. Ensure contact details for key personnel, e.g. fire wardens, team supervisors, first aiders, and camp/base emergency services and external emergency services are included in the ERP;
b. Provide 'leadership in emergency' training courses for supervisors and team leaders;
c. Provide 'what to do in the incident of an emergency' training for other workers and a short form of that for visitor inductions;
d. Provide any specialised equipment, e.g. respirators and protective clothing, firefighting equipment, hazardous substance showers, stretchers to move casualties, so far as is reasonably practicable, necessary to deal with emergencies;
e. Ensure there are enough trained first-aiders to meet the needs of the worksite workers;
f. Ensure that the worksite communication system or its backup is capable of:
(1) Warning workers of an emergency; and
(2) Supporting an emergency response and coordinating relevant personnel;
(3) Ensure the worksite warning system is fit-for-purpose, regularly checked and maintained; and
(4) Regularly test the ERP.

550. The Contractor/FM Provider must regularly:

a. Regularly review the ERP as circumstances on the worksite change or if the camp or base emergency plan changes;
b. Provide emergency training for supervisors and team leaders;
c. Run regular ERP drills for the worksite (notifying the camp or base command prior to the drill); and
d. Ensure training for designated first-aid trained staff is current.

551. The ERP must be:

a. Held in the Contractor's worksite, or FM Provider's, office;
b. Provided to each sub- and subordinate contractor before beginning work at the work site; and be
c. Part of worker induction training.

552. The Contractor/FM Provider must:

a. Provide DEI with the ERP, and update it as the Plan evolves over the course of the project;
b. Notify DEI of the results of emergency drills; and
c. Use the DEI Incident Management System for any incidents.

AUDIT/INSPECTION

553. The Contractor/FM Provider must regularly inspect the worksite for compliance with the CHESS specifications, referring to the ERP checklist for guidance.

554. DEI will regularly spot-inspect the worksite's emergency preparedness and capability to implement the ERP and audit the Contractor/FM Provider's inspection process.

REPORTING

555. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

Emergency Response Plan

Emergency Drill Report
Site Visitor/Induction Register

REFERENCES

Emergency plans, WorkSafe New Zealand, August 2018

12.2 Worksite First Aid Services

POLICY

556. The Contractor/FM Provider is responsible for ensuring all workers on the worksite have ready access to first aid facilities, first aid equipment and trained first aiders.

SPECIFICATIONS

557. The Contractor/FM Provider must ensure that:

a. Trained first aiders (with current recognised First Aid certificates) are available on the worksite at a ratio of one first aider for every ten workers;

b. First aid facilities are readily accessible to all workers on the worksite and sufficient to meet their needs;

c. There is at least one first aid kit on the worksite (including work vehicles), and for multi-storey sites, there is at least one first aid kit per level;

d. The worksite first aid facility has an eye washing station and, where required, has an emergency chemical wash shower;

e. After any incident which is reasonably adjudged to have the potential to have significant effect, the worker or workers involved are medically assessed and a clearance provided by a registered medical practitioner before the worker or workers return to work; and

f. Establish and maintain an Accident Treatment Log or Logs using the template below.

AUDIT/INSPECTION

558. The Contractor/FM Provider must regularly inspect the first aid services, personnel and facilities on the worksite to determine compliance with the specifications.

559. DEI will regularly spot-inspect the first aid facility/s on the worksite, and audit the Accident Treatment Log/s (using the checklist listed below).

REPORTING

560. The Contractor/FM Provider must report monthly on incidents requiring first aid treatment using JARS and make the records available to DEI on request.

TEMPLATES

12.2 First Aid Inspection Checklist

REFERENCES

First Aid, WorkSafe New Zealand, August 2018
First Aid at work, WorkSafe New Zealand.

12.3 Work-Related Gradual Process Injury Prevention and Management

POLICY

561. The Contractor/FM Provider must establish and implement a policy and accompanying processes that prevent/reduce and/or managing work-related gradual onset injuries (defined in Schedule 2 of the *Accident Compensation Act 2001*).

SPECIFICATIONS

562. The Contractor/FM Provider must:

a. Identify worksite hazards linked to work-related gradual onset injuries;
b. Apply appropriate hazard elimination and mitigation strategies and processes;
c. Include those hazard elimination and mitigation strategies and processes in the site induction training; and
d. Ensure contracts between the Contractor/FM Provider, and those between sub- and subordinate contractors include hazard identification, elimination, and mitigation strategies and processes for worksite hazards linked to work-related gradual onset injuries.

AUDIT/INSPECTION

563. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications.

564. DEI will regularly spot-inspect the worksite and audit the Contractor/FM Provider's inspection process.

REPORTING

565. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

REFERENCES

Accident Compensation Act 2001
Understanding work-related gradual process injury - Risky business, ACC

12.4 Return to Work Process

POLICY

566. The Contractor/FM Provider is responsible for ensuring that its sub- and subordinate contractors working on the NZDF worksite have a process in place to support the recovery and rehabilitation of injured workers.

567. That includes requiring those sub- and subordinate contractors to report on workers returning to work after a *Lost Time Injury* or the status of those workers unable to return to work on the NZDF worksite or return to work at all.

SPECIFICATIONS

568. The Contractor/FM Provider must ensure that:

a. Sub- and subordinate contractors report all *Lost Time Injuries* and the recovery progress of workers affected by those *Lost Time Injuries*; and

b. It has the contractual arrangements and communication processes in place to maintain contact with a sub- or subordinate contractor to monitor the recovery/rehabilitation or future disposition of workers affected by Lost Time Injuries that occurred on the NZDF worksite.

AUDIT/INSPECTION

569. The Contractor/FM Provider must regularly assess compliance by sub-contractors and subordinate contractors with their Return to Work process and plans for injured workers.

REPORTING

570. The Contractor/FM Provider must provide monthly reports on the progress of workers injured on DEI project within the bounds of the *Privacy Act 1991* (up to the end of the contractual arrangement with DEI).

TEMPLATES

REFERENCES

Starting the conversation: Recovering at work after an injury, ACC

13 SAFETY PERFORMANCE MONITORING AND REPORTING

INTRODUCTION

571. DEI requires the Contractor/FM Provider to provide a range of KPI safety performance monitoring and reporting, either monthly or immediately after the event. That reporting consists of:

a. Monthly leading and lagging and other health and safety indicators;

b. Immediately after worksite events and the issue of Provisional Improvement Notices, WorkSafe Notices; and Suspension Notices using the Incident Management System process

572. **The IMS** sets out the requirements for initial notifications, investigations and reporting on worksite incidents. The IMS also provides for Lessons Learned and Shared Impact Statements.

573. The reporting mechanism for this is the Joint Assurance and Reporting System (JARS). The reports made through JARS form the basis of DEI worksite health and safety trend analyses.

574. ArcGIS Online is a secure mapping and spatial analysis software as a service (SaaS) platform that DEI uses to provide geospatial insights. The system is built on scalable technology that enables the collection, management and analytics of the organisational data.

575. DEI uses ArcGIS to record asset data, map and record issued Permits to Work, host the Project Hub, record safety inspections, display CHIPS and Non-Conformances results, and record health and safety leadership observations. ArcGIS is linked to Survey 123, enabling review of specific inspection results.

576. Selected Contractors may be provided access to the Permit to Work Hub if they are conducting substantial works on the estate or region i.e. the Main Contractor on a CAPEX project or the FM Provider.

13.1 Worksite Key Performance Indicators (KPIs)

POLICY

Worksite Key Performance Indicators

577. DEI collects a range of quantifiable key performance indicators that it uses to track progress towards its health and safety goal of zero incidents or deaths on its worksites. The KPIs help DEI identify measures which are working and those which are not working or not working as well as they might. To that end, the KPIs provide for a range of monthly and immediate reporting, depending on the KPI.

Monthly Reporting KPIs

578. The Contractor/FM Provider must use JARS to monthly report on:

a. Leading and lagging health and safety indicators;
b. Worker hours;
c. Personnel holding key roles and responsibilities;
d. Key project milestones; and
e. Health and safety activities.

Immediate Reporting KPIs

579. The Contractor/FM Provider must use the Incident Management System to immediately report:

a. Worksite incidents and injuries;
b. Provisional Improvement Notices;
c. WorkSafe New Zealand Notices; and
d. Suspension Notices.

Total Recordable Incident Frequency Rate (TRIFR)

580. New Zealand's TRIFR model is the number of reporting injury and treatment incidents multiplied by 200,000 divided by the total number of hours worked in the period.

581. Where TRIFR information is available from Contractors/FM Providers, DEI accepts four of the indicators as noted below.

Leading and Lagging Indicators	Incidents	TRIFR
Safety Engagements	Near Misses	Lost Time Injury
Hazards Reported	Minor vehicle incidents	Medical Treatment
Safety Observations	Major vehicle incidents	Restricted Duty
Audits	Fire/Explosion	Work Fatality
Inspections	Project Incident	
Workers Inducted	First Aid	

FM Providers

582. DEI also requires its FM Providers to report to DEI through the FM Providers quarterly reports on the following Key Performance Indicators:

a. KPI 3.1 Health and Safety Compliance; and
b. KPI 3.2 Health and Safety Performance.

SPECIFICATIONS

583. The Contractor/FM Provider must report on the KPIs as required above.

AUDIT/INSPECTION

584. DEI will regularly audit to ensure the Contractor/FM Provider has reported against the lagging and leading indicators.

REPORTING

585. The Contractor/FM Provider must report monthly on investigations occurring after the issue of *Suspension Notices* until they are closed.

13.2 Incident Management System

POLICY

Incident Reporting with JARS

586. The Contractor/FM Provider must use the DEI Incident Management System (IMS) in JARS when:

a. Supplying incident information to DEI; and

b. When responding to DEI instructions and inquiries.

587. It does not replace the Contractor/FM Provider's internal reporting processes.

588. For DEI purposes the IMS focusses on managing, investigating and reporting on, Improvement Notices, Prohibition Notices, Non-Disturbance Notices, Suspension Notices, Near Misses[10], First Aid Cases[11], Medical Treatment Cases[12], Lost Time Injuries[13], Notifiable Incidents[14], and Fatalities.[15]

Incident Investigations

WorkSafe New Zealand Investigations

589. NZDF and WorkSafe New Zealand have a *Memorandum of Understanding* setting out the latter's investigative powers on the Defence Estate.

590. For the Contractor/FM Provider, notifiable incidents are liable to investigation by WorkSafe New Zealand unless security matters require excluding of WorkSafe New Zealand investigators from the camp or base.

DEI Investigations

591. DEI reserves the right to investigate any incident, (whether or not the Contractor/FM Provider is conducting or has conducted a separate incident investigation). The results of such an investigation are likely to be available to any subsequent inquiry or court hearing.

SPECIFICATIONS

Using JARS

592. The Contractor/FM Provider must use and apply the JARS User Manual when establishing and implementing:

a. Data capture and management processes and procedures necessary to provide the information captured by JARS; and

b. Provision of the IT equipment needed to interface with JARS and trained personnel capable of inputting the data.

Incident Reporting using JARS

593. The Contractor/FM Provider must use JARS (within the specified timeframe below) to report worksite incidents.

[10] A narrowly avoided injury incident.
[11] An injury that requires first aid treatment but the worker is able to return to work (e.g. Band Aid).
[12] An injury requiring treatment by a medical professional (e.g. stitches).
[13] An injury that causes the worker to be away from work for one shift of more (e.g. sprained ankle).
[14] An injury requiring inpatient treatment at a hospital; which WorkSafe New Zealand must be notified of.
[15] 'He's dead, Jim' WorkSafe New Zealand and NZ Police notification required.

Incident - Initial Report to DEI Timeframe

Incident	Initial Report Time to DEI	Initial Report Time to JARS
Improvement Notice	Immediate	Within 2 hours
Prohibition Notice	Immediate	Within 2 hours
Suspension Notice	Immediate	Within 2 hours
Near Miss	Within 2 hours via JARS	Within 2 hours
First Aid Case	Within 2 hours via JARS	Within 2 hours
Medical Treatment Case	Immediate	Within 2 hours
Lost Time Injury	Immediate	Within 2 hours
Notifiable Incident	Immediate	Within 2 hours
Notifiable Injury	Immediate	Within 2 hours
Fatality	Immediate	Within 2 hours

594. The worker/s involved in or who witnessed the incident, or found the person or persons affected by the incident must assist the injured person/s and notify the worksite Site Supervisor or other site official. Based on the nature of the incident the Site Supervisor or other worksite official must:

a. Determine whether the incident warrants stopping work on the site or part of the site where the incident occurred;
b. Ensure others are not threatened by the cause or the effects/results of the incident;
c. As required, ensure any injured workers or others received appropriate medical attention;
d. Apply first aid, or contact emergency services/camp or base medical services for an immediate medical response, as required;
e. Isolate and protect the incident site, as required, and ensuring nothing relevant to the incident investigation is removed from the site before formal site processing and evidence recording and collection occurs;
f. All evidence collected must be securely stored and turned over to DEI when the investigation ends and DEI may access that evidence for its own investigation as required until then; and
g. In the incident of a Notifiable Injury, the Contractor/FM Provider must notify DEI (Regional H&S Specialist (RHSS), camp or base Estate Deputy Director or Project Manager and WorkSafe New Zealand. DEI will arrange for Military Police to secure the site. WorkSafe New Zealand investigators may only enter a NZDF camp or base when authorised by the OIC Defence Area.

Notifiable Events/Fatalities

595. DEI requires that all notifiable incidents are reported in accordance with the DEI Incident Notification procedure and are recorded through the Initial Incident Report process on JARS within 24 hours or as soon as practicable.

596. For Notifiable Events the Contractor/FM provider must:

a. Follow WorkSafe New Zealand's notification procedures for Notifiable Events;
b. Notify WorkSafe New Zealand as soon as reasonably practical (as per Section 56 of the *Health and Safety at Work Act 2015*), and the DEI Regional H&S Specialist (RHSS), camp or base Estate Deputy Director or Project Manager;
c. Keep a record of the notifiable incident (as per Section 57 of the *Health and Safety at Work Act 2015*); and

d. Take all reasonable steps to ensure the location of the notifiable incident remains undisturbed until resumption of work at the location is authorised by an Inspector.

597. Those reasonable steps do not preclude:

a. Assistance to an injured person;
b. Removal of a deceased person;
c. Actions required to make the site safe or to minimise the likelihood of a further notifiable incident;
d. Actions taken by or under the direction of a police officer, emergency medical or fire services; and
e. Actions permitted by the regulator or an Inspector.

598. Where authorised by the Inspector, work may carry on those parts of the worksite outside the incident location.

Incident Investigation & Incident Investigation Reporting

599. The Contractor/FM Provider must have a robust incident investigation processes capable of:

a. Investigating health and safety incidents;
b. Establishing their cause or causes;
c. Identifying remedial measures to avoid future incidents;
d. Promulgating the lessons from that incident to the worksite workers to enable them to learn from the incident; and
e. Reporting the results of the incident investigation using the Incident Investigation Report template in JARS.

DEI Involvement in Investigations

600. Where deemed appropriate by DEI, it will facilitate significant incident investigations to ensure that:

a. The investigation applies ICAM principles and is adequately resourced;
b. Evidence, e.g. photographs, witness statements, material evidence, and any other information or items material to the investigation are not removed or withheld by any party to the investigation or any other person or entity;
c. No persons are identified in the incident report beyond the use of descriptors such as Project Manager, Supervisor, Involved Person or Worker (e.g. IP1, IP2, IP3, Worker 1, Worker 2, Worker 3);
d. Timeframes for corrective actions are identified;
e. All ICAM evidence is supplied to DEI, including witness statements;
f. Contractors use the Investigations Template provided by DEI; and
g. DEI approves corrective actions.

601. DEI will not lead any incident investigations unless required to do so by NZDF stakeholders. There may be a requirement for the Contractor/FM Provider to assist DEI in preparing industry-wide *Lessons Learned Safety Alert,* as a result of the investigation.

DEI Incident Investigations

602. The Contractor/FM Provider must provide DEI investigators with all possible assistance, including access to staff and project and other documents and communications relevant to the investigation.

Legal Privilege – Application to DEI Incident Investigations

603. Legal privilege in incident investigations is limited to the Glossary definition of the term. It may not be used to prevent DEI interviewing witnesses, gathering evidence, or engaging in any other investigative activity.

Incident Investigation Timeline

Incident	Incident Report Type	Contractor/FM Provider Report delivered to DEI (working days)	Investigation Type
Improvement Notice	Incident Investigation Report	5 days	-
Prohibition Notice	Incident Investigation Report	10 days	5 Whys
Suspension Notice	Incident Investigation Report	10 days	5 Whys
Near Miss	Incident Investigation Report	10 days/20 days	5 Whys/ICAM[16]
First Aid Case	Incident Investigation Report	Monthly (via JARS)	-
Medical Treatment Case	Incident Investigation Report	10 days	5 Whys
Lost Time Injury	Incident Investigation Report	10 days	5 Whys/ICAM
Notifiable	WorkSafe New Zealand	10 days/20 days	ICAM
Fatality	Police & WorkSafe New Zealand	As instructed by DEI	ICAM

Findings and Corrective Actions

604. The Incident Investigation Report must provide substantive findings from the incident with a focus on:
    a. The causes of the incident, such as mechanical and human influences on the incident occurring;
    b. Underlying organisational processes; and
    c. Relevant corrective actions.

605. The Contractor/FM Provider will table and provide evidence of closure of the corrective actions.

Lessons Learned

606. Once the investigation into the incident is complete, the investigation report should have identified lessons learned from the incident, particularly those relating to incident causes capable of being repeated by workers in the future.

607. The Contractor/FM Provider must make those lessons known to workers and wider industry through appropriate methods such as inductions, tool-box talks, notices, an industry-wide *Lessons Learned Safety Alert*, trade journals, and any other method deemed appropriate.

Shared Impact Statements

608. An event or incident imposes costs on construction companies, their employees, and their clients. Often, the overall costs for all affected parties are hidden or under realised.

609. The DEI Shared Impact Statement (SIS) procedure is part of the IMS process as operated by DEI.

610. It involves the distribution of Event Financial Impact Statement (EFIS) forms to all affected parties following an investigation into an event or incident.

611. Each form allows affected parties to provide a summary of the financial costs associated with the event. This includes:
    a. Medical costs;
    b. The cost of lost time injuries;

[16] Either 5 Whys or ICAM based on the severity of the potential injury.

c. Project downtime;
d. Investigation costs;
e. Remediation costs; and
f. Compensation.

612. The EFIS information allows DEI to collate the information and produce a Shared Impact Statement providing an overall summary of the financial impact of the incident.

AUDIT/INSPECTION

Spot Inspections and Process Audits

613. DEI will regularly undertake spot inspections and audit the Contractor/FM Provider's health and safety data capture and incident reporting processes.

Incident Report Audits

614. DEI will audit the incident reports the Contractor/FM Provider generates.

REPORTING

Worksite Safety Reporting

615. The Contractor/FM Provider must provide worksite safety monthly reports using JARS.

Incident Reporting

616. The Contractor/FM Provider must use JARS to supply incident notification and investigation reports.

TEMPLATES

Event Financial Impact Statement (EFIS)
Incident Investigation Report (ICAM)
Incident Investigation Report (short form or 5 Whys)

PROCESSES AND PROCEDURES

DEI Incident Management System – Contractor Incident Response Process Map
IMS-A: Contractor Incident Response Procedure

REFERENCES

JARS User's Manual, DEI

13.3 Health And Safety Representative (HSR) *Provisional Improvement Notices*

POLICY

617. Section 69 of the *Health and Safety at Work Act 2015* empowers a Health and Safety Representative (HSR) to issue *provisional improvement notices* to any person (including corporate entities like companies) contravening or likely to contravene a provision of the Act or regulations or to remedy the things or activities causing the contravention or likely to cause a contravention.

618. When a HSR issues a *provisional improvement notice* to a Contractor/FM Provider or sub- or subordinate contractor, the Contractor/FM Provider must notify DEI of the notice issuance.

619. All HSRs working on the Defence Estate must, at a minimum, hold NZQA Unit Standard 29315 (Describe the role and functions of the Health and Safety Representative in a New Zealand workplace).

SPECIFICATIONS

620. The Contractor/FM Provider must, within 24 hours, notify and provide a copy to DEI of the notice being issued so that DEI can determine what, if any, action to take in relation to the circumstances under which the HSR issued the *provisional improvement notice*.

621. The Contractor/FM Provider must ensure the contract arrangements between it and its sub-contractors, and the contract arrangements between the sub- and subordinate contractors working on the worksite include that requirement.

622. The Contractor/FM Provider must require that relevant sub-contractor processes ensure the Contractor/FM Provider receives notification of the issuance of any *provisional improvement notices.*

623. The Contractor/FM Provider must include this requirement in the CSMP and promulgate it in its instructions to sub- and subordinate contractors working on the worksite.

624. If WorkSafe requires access using a PIN issued by a HSR the OIC must be informed to enable the inspector access in line with the NZDF/WorkSafe New Zealand MOU and to be hosted / escorted to the correct area of the camp or base.

AUDIT/INSPECTION

625. DEI will audit the management of Provisional Improvement Notices to measure compliance with those instructions.

REPORTING

626. The Contractor/FM Provider must regularly report to DEI through an Incident Investigation Report in JARS, on the progress and resolution of any *provisional improvement notices* issued on the worksite.

TEMPLATES

REFERENCES

Health and Safety at Work Act 2015
Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations 2016, Schedule 1
Provisional improvement notice, WorkSafe New Zealand, February 2021
Addressing a health and safety matter with support from a Health and Safety Representative, WorkSafe New Zealand, March 2019
Request to Review a Provisional Improvement Notice, WorkSafe New Zealand,

13.4 WorkSafe New Zealand Notices

POLICY

627. Sub-Part 1 of Part 4 of the *Health and Safety Act 2015* empowers WorkSafe New Zealand inspectors to issue I*mprovement Notices* and *Prohibition Notices*.

628. *Improvement Notices* instruct a business to address a particular health and safety issue within a set timeframe, and *Prohibition Notices* notify a business to immediately stop doing something that breaches health and safety requirements, such as using an unsafe machine

629. DEI treats the issuance of these notices as incidents and the Contractor/FM Provider is responsible for undertaking the required investigation and report preparation.

SPECIFICATIONS

630. When a WorkSafe New Zealand inspector, or other authorised person issues an *Improvement Notice* or a *Prohibition Notice* to a PCBU operating on a NZDF worksite (e.g. the Contractor/FM Provider, a sub-contractor, or a subordinate contractor) then that PCBU must immediately notify the Contractor/FM Provider.

631. On receipt of any Improvement or Prohibition notices, the Contractor/FM Provider must notify DEI verbally within two hours and provide a written copy of the notice to DEI within 24 hours.

632. Then Contractor/FM Provider must then proceed with an Incident investigation and report, as laid out above.

AUDIT/INSPECTION

633. DEI will regularly audit to ensure the Contractor/FM Provider has investigated and reported on I*mprovement Notices* and *Prohibition Notices*.

REPORTING

634. The Contractor/FM Provider must report monthly on I*mprovement Notices* and *Prohibition Notices* and investigations through Incident Investigation Reports in JARS on the at the end of the month following the issuance of the I*mprovement Notice* or *Prohibition Notice.*

TEMPLATES

REFERENCES

Health and Safety at Work Act 2015
A Guide to WorkSafe New Zealand's Enforcement Decision-Making Model (EDM). WorkSafe New Zealand, March 2016

13.5 Suspension Notices

POLICY

635. Section 185 of the *Health and Safety at Work Act 2015* provides that a health and safety medical practitioner may require workers cease to do anything the practitioner considers constitutes, causes, or increases the workers exposure to a hazard, and require the worker's PCBU ensure the worker ceases doing the thing or things specified in the notice. The worker and the PCBU are required to comply with the suspension notice.

636. The Contractor/FM Provider must ensure the contract arrangements between it and its sub-contractors, and the contract arrangements between the sub- and subordinate contractors working on the worksite requiring them to forward a copy of any *Suspension Notice* issued to workers on the worksite Contractor/FM Provider within 24 hours, which in turn must promptly notify DEI.

SPECIFICATIONS

637. The Contractor/FM Provider must notify DEI verbally within two hours of a *Suspension Notice* being issued and provide a written copy of the notice within 24 hours so that DEI can determine what, if any action to take in relation to the circumstances under which the health and safety medical practitioners issued the *Suspension Notice*.

638. Then Contractor/FM Provider must then proceed with an incident investigation and prepare an Incident Investigation Report.

AUDIT/INSPECTION

639. DEI will regularly audit to ensure the Contractor/FM Provider has investigated and reported on the outcomes of Suspension *Notices*.

REPORTING

640. The Contractor/FM Provider must report monthly on *Suspension Notices* and submit reports on the investigations at the end of the month through Incident Investigation Reports in JARS following the issuance of the *Suspension Notice.*

TEMPLATES

REFERENCES

Health and Safety at Work Act 2015

14 WORKSITE HEALTH & SAFETY INSPECTIONS & AUDITS

INTRODUCTION

641. CHESS encompasses three types of inspection and audit. They consist of onsite inspections, spot inspections and audits.

Inspections

642. Regular worksite inspections carried out by DEI officials at the frequency indicated by the project stage's *CSMLS - t*he intent of the inspections is to assess compliance with legislative requirements, guidance documents, relevant standards and specific CHESS requirements.

Spot Inspections

643. Spot inspections undertaken by DEI officials, or where appropriate, Contractor/FM Provider representatives - their purpose is to assess compliance with legislative requirements, guidance documents, relevant standards and specific CHESS requirements.

644. Where a DEI official identifies a non-conformance issue, they will issue a *Non-Conformance Notification* to the Contractor/FM Provider, and require the Contractor/FM Provider to prepare a *Non-Conformance Report*.

Audits

645. Audits examine the activities and operations of the Contractor/FM Provider in respect of its compliance with and enforcement of CHESS requirements and the source legislation, regulations, approved codes of practice, WorkSafe New Zealand guidance and any other relevant material.

646. Where an audit reveals non-conformance, DEI will issue the Contractor/FM Provider with a *Non-Conformance Notification*, and require the Contractor/FM Provider to prepare a *Non-Conformance Report*.

14.1 Inspections

POLICY

648. The Contractor/FM Provider must develop and implement an inspection process for the worksite.

649. The process must:

a. Enable the identification and recording of worksite hazards and risks;
b. Identify activities, processes, actions, plant and equipment and worksite circumstances that are unsafe and/or non-compliant with CHESS requirements (and the source legislation, regulations, approved codes of practice, WorkSafe guidance and other relevant material);
c. Enable an immediate resolution of unsafe worksite conditions and/or unsafe worker behaviour or the development of processes or procedures which resolve the unsafe worksite conditions;
d. Support observations leading to corrective actions;
e. Recognition of worksite hazards and issues needing corrective action;
f. Enable non-conformance notifications;
g. Identify corrective action through the non-conformance report process; and
h. Enable a separate process to eliminate hazards or mitigate the risks associated with the hazards.

SPECIFICATIONS

650. The Contractor/FM Provider must inspect the worksite for unsafe worksite conditions and/or unsafe worker behaviour. The Contractor/FM Provider may refer to or use the CHESS Health and Safety Inspection Checklists as guidance.

651. When unsafe worksite conditions and/or unsafe worker behaviour is identified, the Contractor/FM Provider will take action appropriate to the circumstances. This may include:

a. Stopping the work activity immediately and not resume work until the unsafe worksite conditions and/or unsafe worker behaviour is remediated;
b. Require a new JSA be prepared for the work activity that accurately reflects the requirements of the activity;
c. Require the worker/s engaged in the unsafe behaviour to be subject to a just cause drug/alcohol test;
d. Requiring the worker/s to leave the site for the remainder of the shift or dismissing the worker from the site until allowed to return by the Contractor/FM Provider; and
e. Require the worker's employer to retrain or replace the worker/s.

652. Issues the Contractor/FM Provider must inspect for include but are not restricted to:

a. Workers not following the requirements of the relevant Job Safety Analysis or the relevant Standard Operating Procedure;
b. Electrical hazards such as damaged electrical cabling;
c. Hazardous substances improperly used, managed or secured;
d. Unstable or improperly secured plant or equipment liable to fall;
e. Obstacles like loose cables, slippery or uneven surfaces;
f. Opportunities to trip or fall, e.g. unguarded stair ways;
g. Damaged or poorly maintained plant and equipment;
h. Incorrect or missing guards on equipment;
i. Interrupted sight lines;
j. Poorly maintained or poorly used tools or equipment;
k. Missing or poorly implemented hazard control measures;
l. Combustible material accumulations;
m. Dust;
n. Poorly regulated heat sources;

o. Poor ventilation or air quality;
p. Accretions of building materials, plant and other equipment, and building waste ending up in places not originally planned;
q. Materials, plant and equipment ending up out of place such as inherently dangerous hazardous substances or fuel; and
r. Workers:
    (1) Not following required safety procedures, e.g. using ladders rather than temporary work platforms;
    (2) Not wearing PPE when needed;
    (3) Manually moving heavy or awkward loads when alternatives should apply;
    (4) Suffering from impairment; or
    (5) Fatigued, sick, or otherwise unfit.

AUDIT/INSPECTION

653. DEI will regularly spot-inspect the worksite, and audit the Contractor/FM Provider's inspection process.

REPORTING

654. The Contractor/FM Provider must make the results of inspections available to DEI on request.

TEMPLATES

Inspection Checklists and Evaluations Template
Non Conformance Notification
Non Conformance Report

PROCESSES AND PROCEDURES

ICE-A Contractor Non-Conformance Reporting Process Map
ICE-A: Contractor Non-Conformance Reporting Procedure

REFERENCES

Small Construction Sites - The Absolutely Essential Health and Safety Toolkit, WorkSafe New Zealand,

14.2 Spot-Inspections

POLICY

655. DEI officials will regularly conduct spot inspections of the worksite (with the spot inspection frequency based off the project stage's *CSMLS)*. DEI officials may also inspect randomly based on the worksite circumstances.

656. At the beginning of a project, DEI officials will conduct a full spot inspection of the worksite's health and safety plant, equipment, and other activities and materials related to health and safety on the worksite.

SPECIFICATIONS

657. The issues DEI will inspect for include but are not restricted to:

    a. Workers not following the requirements of the relevant Job Safety Analysis or the relevant Standard Operating Procedure;
    b. Electrical hazards such as damaged electrical cabling;
    c. Hazardous substances improperly used, managed or secured;
    d. Unstable or improperly secured plant or equipment liable to fall;
    e. Obstacles like loose cables, slippery or uneven surfaces;
    f. Opportunities to trip or fall, e.g. unguarded stair ways;
    g. Damaged or poorly maintained plant and equipment;
    h. Incorrect or missing guards on equipment;
    i. Interrupted sight lines;
    j. Poorly maintained or poorly used tools or equipment;
    k. Missing or poorly implemented hazard control measures;
    l. Combustible material accumulations;
    m. Respirable dust in hazardous quantities;
    n. Poorly regulated heat sources;
    o. Poor ventilation or air quality;
    p. Accretions of building materials, plant and other equipment, and building waste ending up in places not originally planned;
    q. Materials, plant and equipment ending up out of place such as inherently dangerous hazardous substances or fuel; and
    r. Workers:
        (1) Not following required safety procedures, e.g. using ladders rather than temporary work platforms;
        (2) Not wearing PPE when needed;
        (3) Manually moving heavy or awkward loads when alternatives should apply; or
        (4) Fatigued, sick, or otherwise unfit for work.

AUDIT/INVESTIGATION

REPORTING

658. DEI must regularly report all non-conformances and other irregularities to the Contractor/FM Provider through *Non-Conformance Notifications*. The Contractor/FM Provider must follow the *Non-Conformance Report* process.

TEMPLATES

14.2 Inspection Checklists and Evaluations Template
Non Conformance Notification
Non-Conformance Report

PROCESSES AND PROCEDURES

ICE-A Contractor Non-Conformance Reporting Process Map

ICE-A: Contractor Non-Conformance Reporting Procedure

REFERENCES

General Risk and Workplace Management – Part 1 of Guidance on the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, WorkSafe New Zealand, February 2019
General risk and workplace management, Part 2 of the Health and Safety at Work (General Risk and Workplace Management Regulations 2016, WorkSafe New Zealand, February 2019
Identifying assessing and managing work risks, WorkSafe New Zealand, July 2017

14.3 Audits

POLICY

659. DEI officials and 3rd party/independent auditors will regularly audit the Contractor/FM Provider's health and safety policy implementation processes. The audit will:

a. Evaluate the Contractor/FM Provider's health and safety policies, processes and procedures;
b. Determine whether they meet legislative requirements and CHESS objectives;
c. Measure conformance to the legislative requirements and CHESS objectives;
d. Identify areas of conformance, areas where improvement is required, and areas of non-conformance;
e. The DEI auditors will prepare an interim report from which the Contractor/FM Provider will note those areas requiring improvement and areas of non-conformance, and make the necessary improvements; and
f. When those measures are complete, the DEI auditors will prepare a final report, which will include those areas requiring improvement and areas of non-conformance, and the actions taken by the Contractor/FM Provider to take corrective or preventative actions to resolve the non-conformance matters.

SPECIFICATIONS

660. The audit focus will be on identifying the merits and deficiencies of the worksite's health and safety processes and procedures and whether they meet with a particular focus on:

a. Compliance with the Health and Safety at Work Act 2015;
b. Operation of the *CSMP/FMSMP*;
c. Hazard recognition, assessment and resolution processes;
d. Worksite health and safety inspections;
e. Non-Conformance processes;
f. Record keeping;
g. Traffic safety management processes;
h. Job Safety Analysis processes;
i. Tool Box Meetings;
j. Worker hours, health and safety training processes, and outcomes;
k. Worker supervision;
l. PPE policy, process and compliance;
m. Safety equipment and safety training;
n. First aid systems and capability; and
o. Worksite management processes.

661. The Contractor/FM Provider will make available all relevant records to the DEI auditors.

662. Audit frequency will occur in accordance with the CSMP/FMSMP's milestones or as otherwise required by DEI.

AUDIT/INVESTIGATION

663. At the beginning of a construction project, PMP works, or maintenance task, DEI/FM Provider officials will undertake a full audit of the worksite's health and safety processes and procedures, and all documentation associated with health and safety for the project's operations.

664. DEI/FM Provider officials will collect and collate 3rd party health and safety audit scores into the *Contractor Health & Safety Indicative Performance System score*.

REPORTING

665. The audit will generate an interim report, which will identify:

a. Areas where the Contractor/FM Provider is meeting legislative and CHESS requirement;

b. Areas where improvement is required; and any
c. Non-Conformance matters.

666. When the interim audit report identifies areas of improvement and areas of non-conformance the Contractor/FM Provider must satisfactorily resolve those matters and include them and their related corrective or preventative actions in the final audit report.

TEMPLATES

REFERENCES

AS/NZS 4801:2001 Occupational health and safety management systems - Specification with guidance
ISO 45001:2018 Occupational health and safety management systems

14.4 Non-Conformance Notifications & Reports

POLICY

667. Throughout CHESS, the Contractor/FM Provider is required to perform specific tasks, generate specific outputs or ensure compliance with CHESS specifications. Where the Contractor/FM Provider does not achieve the required tasks, outputs, or compliance, they will receive a Non-Conformance Notification, and must follow through with the Non-Conformance Reporting process thereafter.

668. The Non-Conformance Report form identifies a non-conformance matter and requests corrective or remedial action from the at-fault party. It also asks the Contractor/FM provider to document the non-conformance details, identify the root cause/s and contributing factors, the corrective or preventative actions proposed and their implementation, and enables non-conformance close out at the completion of the action's implementation.

669. On identifying or becoming aware of a non-conformance, DEI generates a Non-Conformance Notification using the Non-Conformance Report Form on ARC GISs Survey 123.

670. It requires the Contractor/FM Provider to engage in corrective or preventative action. This typically occurs if:

    a. The Contractor/FM Provider fails to meet a particular CHESS health and safety action or process requirement;
    b. A spot-inspection identifies non-conformance on the worksite; and
    c. Through its own inspection processes the Contractor/FM Provider identifies a major non-conformance on the worksite that cannot be readily rectified and because if its nature requires notification to DEI i.e. it is a systemic or potentially catastrophic issue.

671. DEI expects the Contractor/FM Provider to operate its own contract non-conformance process to assist in managing its relationship with sub- and subordinate contractors working on the worksite.

SPECIFICATIONS

672. When DEI identifies a health and safety non-conformance issue on the worksite, it generates a Non-Conformance Report form.

673. The Contractor/FM Provider must:

    a. Identify why the non-conformance occurred;
    b. Develop a corrective or preventative action;
    c. Prepare an action plan that sets out the measures taken to prevent a reoccurrence;
    d. Complete a Non-Conformance Report form which:
        (1) Documents the non-conformance (with photographic evidence if possible);
        (2) Identifies the root causes for the non-conformance;
        (3) Recommend corrective or preventative actions that will prevent further occurrence of the non-conformance, including time frames for individual corrective or preventative actions;
        (4) Detail the corrective or preventative action taken by the at-fault party to resolve the non-conformance (with photographic evidence if possible); and
        (5) Carry out the corrective or preventative action;
        (6) Notify DEI that it has occurred and enable validation of the corrective or preventative action; and
        (7) Enable closeout when the non-conformance report is accepted.

AUDIT/INSPECTION

674. After a Non-Conformance Report is supplied, DEI and/or the Contractor/FM Provider will inspect the corrective or preventative action to determine the outcome of the action process, and if the Non-Conformance Report action has not achieved the desired outcome, the Non-Conformance will remain active until resolved.

REPORTING

675. DEI must update the Non-Conformance Log in Arc GIS.

TEMPLATES

Non-Conformance Notification
Non-Conformance Report

PROCESSES AND PROCEDURES

ICE-A Contractor Non-Conformance Reporting Process Map
ICE-A: Contractor Non-Conformance Reporting Procedure

REFERENCES

15 WORKSITE ACTIVITY SPECIFICATIONS

676. Worksite Activity Specifications sets out DEI's health and safety expectations and its requirements for the day-to-day activities on the NZDF worksite. It does so by citing the regulatory instruments, approved codes of practice, WorkSafe New Zealand (and its predecessors) guidance documents and safe work instruments, and notifying the Contractor/FM Provider that they form the basis for DEI's health and safety inspection and audit regime.

677. A major step in achieving health and safety on each worksite involves managing a range of risks resulting from the unique surroundings. Primary construction of NZDF Camps and Bases occurred in the 1930s-1950s, with limited development and refurbishment of those buildings and facilities thereafter. That means the Camps and Bases are the products of their times, with all the inherent hazards left behind by the past ways of doing things.

678. The different circumstances, in terms of materials used, standards applied, and the haphazard record keeping of the original construction programmes, means that the expectations of today's construction workers are not only quite different than those of their predecessors, but they are only infrequently met.

679. While newer buildings dot the Camps and Bases, the Defence Estate Regeneration Programme (DERP) is systematically addressing the demands of working in the 21st-century places for NZDF. It does so by engaging in wholesale replacement and refurbishment of NZDF buildings and facilities.

680. However, this means that contractors experience the unique challenges of working on a NZDF camp or base such as:

    a. Unmarked or unknown services;
    b. Unmarked or unknown cultural or historic sites;
    c. Unmarked or unknown contaminated sites;
    d. Unmarked or unknown unexploded ordnance;
    e. Lead paint;
    f. Asbestos materials;
    g. Foreign Object Damage; and
    h. Worksite generated hazards to the camp or base.

681. DEI either has, or is currently mapping and/or has mapped these risks in the Camps and Bases and eliminated or mitigated many of them. However, there are no guarantees, and contractors may encounter one or more of the risks during a DEI project, and must take the precautions and measures cited.

15.1 Undocumented Cables and Services

POLICY

682. Many NZDF Camps and Bases have been in operation for more than fifty years, all the while undergoing upgrades and construction, with different standards being applied and often limited record keeping of the location of underground and structural water, gas, electrical and communications services.

683. That means the location of services may not be accurately documented and the services themselves may not conform to current regulations, such as how deep they should be buried or product material appearance or safety standards.

684. DEI will provide the Contractor/FM Provider with the latest information available regarding the location of services; however, this information may not always be accurate.

685. The Contractor/FM Provider will notify DEI in the event of discovery of water, gas, electrical or communications cables and services that are not documented or are not correctly documented.

SPECIFICATIONS

686. The Contractor/FM Provider is responsible for ensuring that in the event of a find of undocumented or incorrectly documented cables and services:

    a. Work stops immediately to assess the type of service and whether damage has occurred;
    b. Workers notify the Contractor/FM Provider or representative;
    c. Notification of the find, its location and other specifics is made immediately to DEI via the Issue Notification form (INForm), available in JARS; and
    d. Work resumes only after an adequate assessment of the impact of the cable or service has on the current task.

687. The Contractor/FM Provider must ensure that the procedures required in the event of finding undocumented cables or services are included in the worksite induction, and included in safety meetings during the demolition/excavation stages of a construction project.

AUDIT/INSPECTION

688. The Contractor/FM Provider must regularly inspect worksite safety meetings to ensure workers are aware of the procedures to follow if they find undocumented cables or services.

TEMPLATES

Issue Notification Form (INForm)

REFERENCE

Guide for Safety with Underground Services, Occupational Safety and Health Service, Department of Labour, October 2002
Excavation Safety, WorkSafe New Zealand, July 2016
Your guide to working on the road and staying alive, New Zealand Utilities Advisory Group, March 2020

15.2 Cultural & Historic Sites

POLICY

689. NZDF land contains a wide range of pre-1900 archaeological sites protected from modification or destruction by worksite activities like demolition, site preparation and site excavation by the *Heritage New Zealand Pouhere Taonga Act 2014*. NZDF land also contains post- 1900 sites that may be declared archaeological sites by Heritage New Zealand Pouhere Taonga.

690. These sites contain material relating to the history of New Zealand in general as well as the past activities of the NZDF and its predecessors, including koiwi (human remains) or artefacts and the remains of structures in one form or another.

691. DEI Environmental Services will advise the Contractor/FM Provider about whether camp or base records indicate the possible archaeological or historic sites, and what to do in the event of a find.

SPECIFICATIONS

692. The Contractor/FM Provider is responsible for ensuring that in the event of a find of archaeological material[17]:

    a. Work stops immediately;
    b. Workers notify the Contractor/FM Provider or representative;
    c. Notification of the find is made immediately to DEI Environmental Services;
    d. The worksite is secured and cordons put up (at least 10m from the site of the find); and
    e. Work resumes only after notification by the Environmental Officer.

693. The Contractor/FM Provider must ensure that the procedures required in the event of finding archaeological material are included in the worksite induction, and included in safety meetings during the demolition/excavation stages of a construction project.

694. After an archaeologist establishes the type of remains, i.e. human or archaeological artefact, the Environmental Officer will immediately advise the local authority, Heritage New Zealand Pouhere Taonga and NZ Police (if human remains are found) and arrange a site inspection with these parties. If the find contains koiwi or artefacts of Maori origin, the Environmental Officer will notify representatives from the relevant Mana Whenua of the nature and location of the discovery.

AUDIT/INSPECTION

695. The Contractor/FM Provider must regularly inspect worksite safety meetings to ensure workers are aware of the procedures to follow if they find archaeological material.

TEMPLATES

Issue Notification Form (INForm)
15.2 Historic and Cultural Site Inspection Checklist

REFERENCE

Heritage New Zealand Pouhere Taonga Act 2014

[17] Covered by DEI Environment Services Accidental Discovery policy. Contact DEI Environmental Services for further information.

15.3 HAIL and Contaminated Sites

POLICY

696. DEI Environmental Services is responsible for advising contractors on all environmental compliance matters related to Hazardous Activities and Industries List (HAIL) and contaminated sites. The content of this section addresses only the human health and safety considerations of HAIL and contaminated sites.

697. The HAIL records land sites where activities and industries have or are likely to have caused land contamination through hazardous substance use, storage or disposal. The HAIL List can be deceptive because an activity or industry for a site does not mean the use, storage or disposal of hazardous substances, but rather a likelihood based on the site's history. Conversely, no listing for a site does not mean that it is not contaminated.

698. NZDF Camps and Bases are dotted with HAIL sites left over from decades of military activity such as workshops, fuel and ammunition storage, rifle ranges, hazardous waste disposal, and so on.

699. Before work is allowed to start on a NZDF construction site known to be a HAIL site, DEI Environmental Services will advise on all environmental and regulatory requirements for the work. The project's HAZID Analysis identifies any known HAIL sites in and around the worksite before work commences.

700. However, unrecorded use, storage and disposal of hazardous substances, particularly deeply buried waste and/or contaminant migration from an adjacent site, means contractors may find unrecorded HAIL sites during their work.

SPECIFICATIONS

701. The Contractor/FM Provider must manage a known HAIL site's health and safety precautions in accordance with the advice and instructions/requirements provided by DEI Environmental Services.

702. That may involve instituting a run-off management process (which must comply with environmental regulatory requirements, as advised by DEI Environmental Services), requiring the wearing of specific PPE, limiting the use of demolition or excavation machinery, and so on.

703. Nothing in the health and safety precautions may contravene a requirement set out in existing Contaminated Site Management Plans or Stormwater Management Plans. Should the Contractor/FM Provider discover undocumented contamination in the ground, the Contractor/FM Provider must:

    a. Immediately stop work;
    b. Notify DEI Environmental Services immediately; and
    c. Secure/ cordon the work area, use appropriate PPE, install relevant signage and await DEI instructions before resuming work.

704. The Contractor/FM Provider must ensure that the procedures required in the event of finding contamination in the ground are included in the worksite induction, and included in safety meetings during the demolition/excavation phase of a construction project.

705. The Contractor/FM Provider is responsible for ensuring that sub- and subordinate contractors have notified their workers about the risks and procedures to follow if they find ground contamination, through safety meetings.

AUDIT/INSPECTION

TEMPLATES

Issue Notification Form (INForm)
15.3 HAIL Site Inspection Checklist

REFERENCE

Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

15.4 Unexploded Ordnance

POLICY

706. Ordinarily, it is unlikely that contractors will find unexploded ordnance during work on NZDF worksites. Prior to works commencing, a DEI HAIL site investigation assesses the worksite for unexploded ordnance. Where a likelihood of unexploded ordnance exists, site investigation and remediation occurs first.

707. However, the HAIL site investigation is limited to locations where the presence of ordnance was normal and authorised, e.g. ammunition stores and firing ranges. HAIL investigations cannot locate unexploded ordnance where it is not supposed to be.

708. Discoveries of non-explosive practice ammunition on NZDF worksites have highlighted the limitations of the HAIL site investigation process, and DEI requires contractors follow the process set out below.

SPECIFICATIONS

709. In the event that a suspicious object is unearthed or discovered during construction work, the Contractor/FM Provider must follow all DEI Accidental Discovery Protocols, and ensure that workers:

a. Assume a suspicious object is not safe;
b. Immediately stop work, evacuate and cordon the work area and the immediate vicinity (at least 100m from the site of the discovery);
c. Notify DEI immediately and submit a completed Issue Notification form (INForm), available in JARS; and
d. When the NZDF Explosive Ordnance Disposal team advises DEI the site is clear the official notifies the Contractor/FM Provider in writing that work may recommence.

710. The Contractor/FM Provider must ensure that the procedures required in the event of finding a suspicious object are included in the DEI Accidental Discovery Protocol, worksite induction, and included in toolbox talks during the demolition/excavation phase of a construction project.

711. The Contractor/FM Provider is responsible for ensuring that sub- and subordinate contractors have notified their workers through safety meetings about the risks and procedures to follow if they find a suspicious object.

TEMPLATES

Issue Notification Form (INForm)

15.5 Lead-Based Paint

POLICY

712. NZDF has adopted the NZDF Lead Paint Management Plan to manage lead-based paint on the Defence Estate. The Plan sets out the criteria and practices required to remove, encapsulate, overpaint or otherwise manage lead-based paint.

713. The Contractor/FM Provider must comply with the Plan requirements for lead-based paint when working on or in the vicinity of locations known or assumed to be painted in lead-based paint.

SPECIFICATIONS

Permits to Work for Lead-Based Paint Tasks

714. The Contractor/FM Provider must follow the risk assessment approach set out in the Management Plan to determine whether the work involving lead-based paint requires a *Permit to Work*. Where one is required, the Contractor/FM Provider must apply for a *Permit to Work*.

AUDIT/INSPECTION

715. The Contractor/FM Provider must regularly inspect lead-based paint related works requiring a *Permit to Work* for compliance with the NZDF Lead Paint Management Plan and CHESS specifications.

716. DEI officials will regularly spot-inspect lead-based paint related works and regularly audit the Contractor/FM Provider's inspection processes subject to a Permit to Work.

TEMPLATE

15.5 Lead Paint Works Inspection Checklist

REFERENCE

NZDF Lead Paint Management Plan
Guidelines for the Management of Lead-Based Paint, Occupational Safety and Health Service, Department of Labour, June 1995 (revised September 2013 by the Ministry of Health and the Ministry of Business, Innovation and Employment).
Respiratory protective equipment – advice for businesses - Fact Sheet, WorkSafe New Zealand, December 2020
AS/NZS 4361.2:2017 – Guide to hazardous paint management – Part 2: Lead paint in residential, public and commercial buildings

15.6 Asbestos Management & Removal

POLICY

Asbestos Management Principles and the *Defence Estate Asbestos Management Plan*

717. DEI manages a large property portfolio made up of approximately 4,700 buildings and structures constructed prior to 1 January 2000, as well as a significant quantity of sub-surface infrastructure. Many of those buildings and sub-surface infrastructure assets contain asbestos of various types presenting varying levels of hazards to users and maintainers.

718. Because of the prevalence of asbestos in the Defence Estate, DEI applies the following principles:

a. Assume all buildings, structures, plant and sub-surface infrastructure constructed before 2000 contain asbestos, unless proven otherwise; and

b. Asbestos containing materials must not be disturbed, damaged or allowed to deteriorate to such an extent that asbestos fibres become airborne and exceed the industry accepted airborne contamination standard.

719. To manage asbestos in the Defence Estate, NZDF has adopted the *Defence Estate Asbestos Management Plan*. It applies to all pre-2000 Defence Force owned land and infrastructure, including sub-surface infrastructure and soils where legacy asbestos contamination may be present.

Construction Projects, PMP Works and Maintenance Tasks

720. The Contractor/FM Provider must assume the presence of asbestos unless proven otherwise.

721. The Contractor/FM Provider must check for information on the type, condition, location and risk of asbestos on the NZDF Asbestos Register prior to commencing any work with the potential to disturb asbestos, including all pre-2000 buildings and infrastructure we well as soils where asbestos may be present.

722. The Contractor/FM Provider must not exclusively rely on management survey information to undertake refurbishment or demolition works unless all areas of the building have already been assessed by a competent person, For this type of activity an additional (intrusive) survey is required .

723. The Contractor/FM Provider may procure their own asbestos surveyor to undertake additional inspections, but must use the DEI supplied *Asbestos Consultancy Services Statement of Work Templates* for this purpose.

724. The Contractor/FM Provider must not procure asbestos management surveys. For this survey type the contractor must contact *asbestos@nzdf.mil.nz* to explain the requirements of the work.

725. The Contractor/FM Provider must ensure that any work involving asbestos follows the requirements set out in the *Defence Estate Asbestos Management Plan*, including work involving:

a. Intrusive asbestos surveys/inspections as well as any localised sampling of asbestos containing materials; and

b. Planned disturbances of asbestos, including asbestos removal and all asbestos related works; and

c. Inclusive of access into areas currently assumed to contain asbestos.

726. The Contractor/FM Provider must ensure that work involving a planned disturbance of asbestos does not proceed without prior written approval from the DEI Asbestos Manager. All related documentation must be provided for approval to the Asbestos Team, including but not limited to:

a. In advance of the works:

(1) Completed Asbestos Consultancy Services Statement of Work Templates;

(2) Standard Operating Procedures relevant to the proposed task(s);

(3) Job Safety Analyses for asbestos related permit applications; and

(4) Asbestos Removal Control Plans (ARCP) in advance of licensed asbestos removal.

b. During and following the works:

(1) Integrity (smoke) test certificates;

(2) Within 24 hours of air monitoring completion, all air monitoring reports if the reported fibre concentration is above trace level (0.01f/ml or above);

(3) Notifications of any incidents involving suspected or potential asbestos exposures;

(4) Observations or bulk analysis results for any suspect asbestos containing materials discovered during the works, including asbestos in soils analysis;

(5) Clearance certificates for licensed asbestos removal or close out information for unlicensed asbestos removal.

SPECIFICATIONS

Planned Work Involving Asbestos

727. For all types of asbestos removal and asbestos related works (including asbestos surveys), the Contractor/FM Provider must:

a. Ensure all workers involved in the task apply task appropriate site-specific control measures in accordance with the *Approved Code of Practice for the Management and Removal of Asbestos, WorkSafe 2016. (or superseding guidance)*, the *Defence Estate Asbestos Management Plan* and (where relevant) the BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soils;

b. Adequately isolate the work area from other workers with physical barriers and warning signage to prevent unauthorised entry into the area at all times whilst an exposure risk remains present;

c. Use at minimum a quantitatively face-fit tested half-face respirator with a P3 filter whilst undertaking any planned asbestos disturbance as described in the safety plan;

d. Prepare a safety plan that details the controls that will minimise the risk of airborne fibre release and the potential for exposure to all workers and others, as far as reasonably practicable – in line with the *Defence Estate Asbestos Management Plan*;

e. Provide appropriate worker training and supervision;

f. Obtain a *Permit to Work* from the DOC, authorised DEI official, or FMPI.

g. Ensure all asbestos waste is removed from the NZDF estate as quickly as possible for disposal, or if required stored safely in accordance with the *Approved Code of Practice for the Management and Removal of Asbestos, WorkSafe 2016.*

h. Not undertake any works involving the use of any prohibited methods on asbestos or ACM (including asbestos contaminated soils), or restricted methods if not used in conjunction with additional controls with the specific intention of capturing or extracting airborne asbestos fibres;

i. Undertake asbestos airborne fibre monitoring at least daily during Class A licensed asbestos removal works and at appropriate times for all other types of asbestos work where there is either:

(1) Uncertainty about the potential for fibre release during the planned work, or;

(2) The need to demonstrate the effectiveness of asbestos RPE, or;

(3) The works are planned in a sensitive location within view of other NZDF personnel, other contractors or the public, or;

(4) For some other reason additional reassurance is necessary for other NZDF personnel, other contractors or the public.

728. For asbestos surveys the Contractor/FM Provider must:

a. Prepare a JSA for the task that describes the level of intrusions planned within the survey area, and include safe sampling methods; or

b. Where using Standard Operating Procedures, include these SOPs as part of the approval before undertake the works.

729. For asbestos related works or unlicensed asbestos removal the contractor must:

a. Prepare a JSA for the task which includes safe entry and exit procedures to the work area, safe work methods to minimise the creation of dust whilst undertaking the proposed tasks, decontamination procedures for personnel and any equipment, and safe disposal methods for the asbestos and / or disposable PPE; and

b. Provide evidence of appropriate asbestos awareness training which must include (to a relevant standard) identification, safe handling, and suitable control measures for asbestos, as well as the safe use and maintenance of asbestos PPE and RPE.

Note: for unlicensed asbestos removal the contractor can produce an ARCP in place of a JSA.

730. For licensed asbestos removal work the asbestos removalist must:

a. Hold the appropriate asbestos removal licence (considering not only the type and quantity of asbestos, but also the proposed methods of removal);
b. Notify WorkSafe New Zealand a minimum of 5 days in advance of the proposed commencement of any (non-emergency) licensed asbestos removal;
c. Prepare an Asbestos Removal Control Plan which must include a detailed methodology, an exposure risk assessment and a risk assessment of all non-asbestos hazards and control measure related to the works;
d. Ensure the asbestos workers (including the supervisor) have the necessary training and Qualifications / certification for the work;
e. Maintain controls in the asbestos removal work area, including (where installed) negative pressure units 24/7 unless otherwise agreed with the DOC or the FMPI, and until a clearance is issued by an independent competent person (Licensed Asbestos Assessor for all Class A works);
f. Not directly engage a Licensed Asbestos Assessor or competent person to undertake air monitoring or clearance inspections, and must declare any actual or potential conflicts of interest between themselves and the allocated Licensed Asbestos Assessor or competent person; and
g. For Class A licensed asbestos removal the asbestos removalist must ensure a licensed supervisor remains on site at all times during each shift.

731. During and after asbestos removal, Asbestos Assessors and independent competent persons undertaking asbestos airborne fibre monitoring and clearance inspections must:

a. Be able to demonstrate competency for undertaking the independent review of the tasks described within the JSA or ARCP for the project;
b. Provide air monitoring results each day a maximum of 24 hours after the end of the monitoring period, or (in regional areas) enact a plan to deliver the results as fast as reasonably practicable each day;
c. Declare any actual or potential conflicts of interest between themselves and others involved in the project; and
d. Consult with DEI prior to making decisions that may result in asbestos remaining present in the building/site.

Record evidence of failed clearance inspections .Shared Duties

732. In the event that other contractors are working in the same area of the worksite, the Contractor/FM Provider must confer with the other contractors to ensure that their workers comply with the asbestos specific control measures and other processes that minimise the risk of exposure.

Site Inductions

733. Should the Contractor/FM Provider controlling an active asbestos worksite need someone else to enter the worksite, they must induct the worker before allowing them entry into the area. The induction must include:

a. Making information available to the worker including risk assessments;
b. Ensuring they have adequate PPE and RPE and the means to use them effectively; and
c. What to do in the event of an incident or emergency.

Note: The contractor in control of the work area must not allow anyone to enter an active asbestos work area unless they have adequate training to control the specific risks on site.

Accidental Discovery

734. For any planned intrusive works on pre-2000 buildings or infrastructure, including soils where asbestos could be present, the Contractor/FM Provider must:

   a. Consider the likelihood of finding asbestos and include asbestos in their accidental disturbances procedure; and

   b. In the event the workers do find suspected asbestos, the Contractor/FM Provider must immediately complete and submit an Issue Notification form (INForm), available in JARS, to DEI.

735. DEI will provide further instructions about what to do.

Asbestos Incident and Emergency Reponses

736. An asbestos emergency event relates to an uncontrolled circumstance or event where potential for significant loss of life or property is likely without immediate intervention.

737. An asbestos incident event is an event that is either unplanned or unusual that has or may have resulted in an uncontrolled release of asbestos fibres into the air within an occupational setting.

738. In the event of either an asbestos related emergency or incident, the Contractor/FM Provider must:

   a. Stop works and exit the work area;

   b. Isolate the area if safe to do so and if an ongoing exposure risk may be present;

   c. Inform DEI;

   d. Follow a decontamination process if needed, or dispose of potentially contaminated clothing;

   e. Not proceed to other areas of the NZDF site if wearing contaminated clothing;

   f. Not re-enter the area without specific written permission by either the DEI Asbestos Manager or following confirmation that the risk is under control by an independent and competent asbestos professional, or;

   g. Only enter the area by assuming asbestos is present and treating the works as asbestos related.

AUDIT/INSPECTION

739. The Contractor/FM Provider must regularly inspect asbestos work areas for compliance with the specifications.

740. DEI officials will regularly spot-inspect asbestos work areas and regularly audit the Contractor/FM Provider's inspection processes.

REPORTING

741. Asbestos consultants engaged to undertake asbestos related works on camps and bases must:

   a. Send all asbestos survey reports to asbestos@nzdf.mil.nz for review and inclusion in the NZDF Asbestos Register.

   b. Completed all asbestos management surveys using the Survey 123 ArcGIS form using an NZDF owned pool device obtained from the local Delivery office.

   c. Send full clearance certificate to asbestos@nzdf.mil.nz for review and inclusion in the NZDF Asbestos Register.

742. Licensed and unlicensed asbestos removalists engaged to remove asbestos on camps and bases must:

   a. Provide the Asbestos Removal Control Plan (ARCP) for licenced work or the Safe Work Practice (SWP) for unlicensed work to asbestos@nzdf.mil.nz for review and approval in advance of the works.

   b. Ensure air monitoring reports are provided to asbestos@nzdf.mil.nz for review whenever a calculated concentration of airborne fibres breaches trace level (0.01f/ml and above).

743. All Contractors/FM Providers engaged in any type of asbestos work on the camps and bases must:

a. Undertake all works to a standard that meets or exceeds the requirements of the Approved Code of Practice for the Management and Removal of Asbestos and the Defence Estate Asbestos Management Plan;

b. In the event of an accidental discovery, use the Issue Notification form (INForm), available in JARS;

c. In the event of an accidental discovery, the Contractor in control of the work area must Issue Notification form (INForm), available in JARS; and

d. Ensure FLOC numbers and any unique room or location identifiers are included in all reports.

TEMPLATES

Asbestos Survey Report – via the Survey 123 App.
Issue Notification Form (INForm)
15.6 Asbestos Management Inspection Checklist

REFERENCES

NZDF Asbestos Management Plan
Approved Code of Practice for the Management and Removal of Asbestos, WorkSafe New Zealand, November/December 2016
Approved method for managing risks associated with asbestos when transporting buildings, WorkSafe New Zealand, March 2016
Approved Method for Temporary Storage of Asbestos Waste, WorkSafe New Zealand, 30 June 2017
Personal Protective Equipment to Use When Working with Asbestos, April 2016
Respiratory protective equipment – advice for businesses, WorkSafe New Zealand, December 2018
Respiratory protective equipment – advice for workers, WorkSafe New Zealand, September 2018
What You Should Know About Working with Asbestos, WorkSafe New Zealand, April 2016
Working with or near asbestos – for builders, WorkSafe New Zealand, April 2018
Working with or near asbestos – for electricians, WorkSafe New Zealand, April 2018
Working with or near asbestos – for painters, WorkSafe New Zealand, April 2018
Working with or near asbestos – for plumbers, WorkSafe New Zealand, April 2018
Refurbishment versus maintenance, WorkSafe New Zealand, October 2017

15.7 Foreign Object Damage

POLICY

744. Any work on or around airside facilities and services risks injury to NZDF personnel and damage to aerial and ground assets through Foreign Object Damage (FOD).

745. FOD may result from anything left on the airside, such as tools, materials, excavated material, waste and other debris which may damage aircraft e.g. burst tires, penetrate fuselages, or be sucked into engines, or picked up and hurled at high velocity by engine thrust.

746. The Contractor/FM Provider is responsible for ensuring that airside work does not create opportunities for FOD.

SPECIFICATIONS

747. The Contractor/FM Provider must ensure:

a. Airside workers have worksite induction training relating to the identification, hazards and prevention of FOD;
b. Airside workers prevent the movement of all potential FOD-material (as far as is practicable) onto airside worksites;
c. Airside workers manage the worksite to ensure that equipment, materials and packaging are not left behind or blown away;
d. Operate a FOD-Prevention Register for tools, equipment, and other plant and materials taken for use in the airside zone, which accounts for what is used and not used;
e. Airside workers work through the FOD Prevention Register prior to leaving the airside worksite and ensure it is cleared of potential FOD materials, and remove all tools, other equipment, unused materials and anything else that has the potential to create FOD; and
f. Workers responsible for work vehicles driven onto the airside zone must secure all unused equipment and plant inside their vehicles, so it is not capable of accidentally leaving the vehicle through environmental or other causes.

AUDIT/INSPECTION

748. The Contractor/FM Provider must:

a. Inspect airside worksites before and after works to determine the effectiveness of the FOD prevention activities; and
b. Liaise with the regular anti-FOD activities on the camp or base to determine if any potential FOD material has been recovered from the airside worksite activities.

749. DEI will spot-inspect airside work for FOD material and check the Contractor/FM Provider's Anti-FOD Register following airside work.

REPORTING

750. The Contractor/FM Provider and Unit Air Field Management must immediately report any potential FOD materials left behind or lost from the worksite to DEI and relevant camp or base command personnel.

751. The Contractor/FM Provider must make the results of inspections available to DEI on request.

TEMPLATES

15.7 Airside FOD Inspection Checklist
FOD-Prevention Register

REFERENCES

CAA Advisory Circular 139-5 Operational Safety during Works on Aerodromes

16 THE WORKSITE

INTRODUCTION

752. The Worksite sets out DEI expectations for healthy and safe practices on camp or base worksites, with guidelines for dealing with the idiosyncrasies of the camps or bases.

753. While the camps and bases have their unique challenges, the run-of-the-mill issues of any worksite create more familiar but no less potentially risky circumstances for workers. They may include:

a. Incomplete and inaccurate service maps;
b. Poorly mapped or marked service isolation systems;
c. Providing and managing a worksite electricity supply;
d. Road and vehicle safety and parking;
e. Placement and use of safety barriers;
f. Worksite signage;
g. Worksite lighting;
h. Electrical safe distances; and
i. Managing visitors.

16.1 Overhead, Surface & Sub-Surface Services

POLICY

754. The Contractor/FM Provider must use DEI service maps and the DEI Functional Location Object Code (FLOC) system when working on camp or base construction projects, PMP works or maintenance tasks.

Service Maps

755. Services on NZDF bases and camps consist of a wide variety of overhead, surface/in building and sub-surface types, which are both functional and non-functional. Each NZDF base has its services mapped on GNZ maps, and those services include:

a. Air conditioning;
b. Communication points and lines;
c. Compressed air systems;
d. Drainage systems;
e. Electrical lines and infrastructure;
f. Fire lines and infrastructure;
g. Fuel points, plant, and lines;
h. Gas lines and infrastructure;
i. Hot water systems, lines and outlets;
j. Irrigation systems;
k. Sewage lines and infrastructure;
l. Steam lines and points; and
m. Water lines, supply points and other infrastructure

756. While DEI makes every effort to ensure services maps are correct, services maps may not be complete or accurately reflect actuality on the ground. Any of the following issues may apply:

a. Site and service history records may have been lost or not made;
b. Reference points may have changed;
c. Surface regrading may mean depths shown are incorrect;
d. The services are built to older standards unfamiliar to workers;
e. The depth of services are to older standards;
f. Services may have moved, or been laid around in-ground or above ground obstacles;
g. Multiple services may be adjacent;
h. Service connections may be poorly or not marked;
i. Straight lines on a map may actually twist and turn in the ground; and
j. Cables were laid in horizontal hoops to avoid tight bends.

Asset Information Mapping

757. The Functional Location Object Code system enables NZDF to identify the location and the purchase, maintenance history and likely replacement date for individual assets. FLOC information assists in locating specific assets and ascertaining the best course of action in maintaining, renovating or replacing those assets.

758. When the contractor finishes work on the asset, DEI updates the FLOC register.

759. Not every asset NZDF owns has an entry in the FLOC system but work is ongoing to include all its assets in the FLOC system.

SPECIFICATIONS

760. The Contractor/FM Provider must:

a. Review the camp or bases service maps provided by DEI before commencing the task;
b. Identify services affected by the task; and

c. Apply appropriate risk controls, such as:
   (1) Minimum safe working distances from overhead and subterranean services;
   (2) Marking underground services where required, and where the works are likely to interfere with those underground services, take appropriate actions to avoid interfering with those services, or use appropriate methods to safely expose those services; and
   (3) Notifying workers of surface/in building services where the works are occurring and there is a likelihood of the works and the surface/in building services coinciding.

761. The Contractor/FM Provider must:

a. Apply that information in the development of Job Safety Analyses and Permit to Work applications;
b. Obtain a Permit to Work before work commences;
c. Take appropriate precautions to avoid incidents resulting from inaccuracies in service maps, including service location checking using services and processes such as:
   (1) Utility wands;
   (2) Dial Before Dig;
   (3) Pot holing;
   (4) Hydrovaccing; and
   (5) Ground penetrating radar.
d. Notify DEI in the event of damage to services and take appropriate isolation and/or remedial action as directed by DEI;
e. Notify DEI where service maps and the actual position of services do not match; and
f. On the completion of the works, provide DEI with the information necessary to update GNZ maps where the provided plans and other information prove inaccurate.

AUDIT/INSPECTION

762. The Contractor/FM Provider must regular inspect the use of NZDF service maps and Functional Location Object Code (FLOC) information in the project.

763. DEI will regularly spot check and audit the application of NZDF service maps and FLOC information on the worksite.

REPORTING

764. The Contractor/FM Provider must regular report on the positioning, status and condition of NZDF services revealed by the project works using the Issue Notification Form below.

TEMPLATES

Issue Notification Form (INForm)
Permit to Work Application Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Excavation safety, WorkSafe New Zealand, July 2016
Guide for Safety with Underground Services, Occupational Safety & Health Service, Department of Labour, October 2002.
Your guide to working on the road and staying alive, New Zealand Utilities Advisory Group, March 2020

16.2 Services Isolation

POLICY

765. Many DEI worksites require service isolation before work on the worksite may safely commence. To ensure that, DEI will:

    a. Confirm which services require isolation before work begins, referencing camp or base GNZ services map, the HAZID Analysis Register, as well as relevant service and system diagrams and any other relevant records; and
    b. Provide detailed instructions on the isolation processes for the specific worksites.

766. When the work is complete, resumption of the service may only occur after DEI has inspected the work, or had the service inspected by a qualified third party or sign-off entity (e.g. local authority building inspector).

SPECIFICATIONS

767. Before work may commence, the Contractor/FM Provider must:

    a. Ensure that all relevant information about the services applicable to the worksite and their isolation timeframes are provided before the work begins;
    b. Ensure the worker or workers involved are competent to isolate the service, e.g. possess nationally recognised qualifications for the task, and are able to produce proof of those qualifications;
    c. Verify the isolation instructions before isolating the service and commencing work;
    d. Isolate equipment and plant in accordance with the manufacturer's or the supplier's instructions or in accordance with operator manuals or advice from service personnel and workers servicing the systems or plant; and
    e. Notify DEI at the completion of the work and resume the services after inspection of the work by DEI or a qualified third party or local authority building inspector, or in the instance of self-certifiable work, the Contractor/FM Provider has certified the work as meeting statutory or other relevant safety and/or quality requirements.

768. The Contractor/FM Provider must follow the following process for isolating systems:

    a. Identify the system involved and the relevant energy or other material (e.g. clean, grey or black water);
    b. Identify the hazards associated with the system and the energy or other material it uses or conveys;
    c. Prepare Job Safety Analysis and/or a Permit to Work application as required;
    d. Shut down the system;
    e. Exhaust, remove, or run down any stored energy or other material as required;
    f. Isolate the system from the energy or other material source;
    g. Ensure the isolation points match the drawing and details supplied in the Job Safety Analysis and/or a Permit to Work;
    h. Ensure the isolation device is effective;
    i. Ensure the isolation is open or closed as required;
    j. Use an appropriate tag or locking system control to tag and lock isolations;
    k. Control the other relevant hazards;
    l. Test by attempting a reactivation of the system, to ensure isolation applies;
    m. When the system is safe, proceed with the task; and
    n. When the task is complete, and after the relevant systems safety inspection and service check, the persons responsible for tagging or locking the system controls must remove the tags or locks before returning the system to operating status.

AUDIT/INSPECTION

769. The Contractor/FM Provider must regularly inspect the works using a Service Isolation Report form, and ensure that service isolation has occurred correctly.

770. DEI will regularly spot-inspect works involving service isolation to ensure the service isolation has occurred correctly and regularly audit the Contractor/FM Provider's inspection processes.

REPORTING

771. The Contractor/FM Provider must make inspection results available to DEI on request.

TEMPLATES

16.2 Isolation Inspection Checklist
Permit to Work form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Keeping workers safe when servicing machinery, WorkSafe New Zealand, January 2021
New Zealand Electrical Code of Practice for Homeowner/Occupiers Electrical Wiring Work in Domestic Installations, Energy Safety Service, July 2004
Isolation of plant, *2010*, Commission for Occupational Safety and Health, Department of Commerce, Government of Western Australia, 2010
Lockout, Safe practices for Isolation of all sources of energy in sawmills, Occupational Safety and Health Service, June 2003

16.3 Worksite Electrical Supply

POLICY

772. The Contractor/FM Provider is responsible for safely reticulating electricity supply to the worksite where the worksite is using electrical power drawn from the camp or base's mains electricity sources.

773. DEI will make the necessary arrangements for the Contractor/FM Provider to access the camp or base's mains electricity sources.

SPECIFICATIONS

774. The Contractor/FM Provider must:

a. Obtain a Permit to Work is required for any work involved in the reticulation, maintenance and repair of high voltage services on the worksite;
b. Use suitably qualified workers to reticulate electricity to and around the worksite;
c. Regularly inspect, maintain and repair electricity reticulation systems on the worksite;
d. Ensure that any damage sustained by electrical equipment or plant on the work is repaired and tested by a qualified technician before any work involving that electrical equipment or plant resumes;
e. Ensure that worker inductions include the safe use of electrical supply systems or associated plant on the worksite;
f. Ensure the induction instructs workers on avoiding unsafe practices or procedures involving the worksite electrical supply or plant systems. This includes ensuring:
    (1) Leads are elevated above ground level on non-conductive stands, hooks or conduits;
    (2) Leads do not obstruct entrances and exits;
    (3) Leads do not run over flat flooring or metal structures;
    (4) Lead plugs are in good condition and not damaged or modified;
    (5) All plugs are clean and fitted properly;
    (6) All 240V leads do not exceed 30m and are not extended;
    (7) All power leads are inspected for damage prior to use;
    (8) Double adapters and piggy back plugs not used;
    (9) All Electrical equipment is grounded where applicable; and
    (10) IP rated multi boxes designed for commercial use (Not units designed for home use e.g. Plug Boss branded units).
g. All electrical equipment on the worksite must be RCD protected and regularly tested and tagged for compliance by a qualified person against the relevant standards;
h. Welders must be fitted with a Voltage Reduction Device where appropriate;
i. Temporary power boxes have at least a 1m clearance from hazards and obstruction; and
j. Switchboards are labelled and locked correctly.

AUDIT/INSPECTION

775. The Contractor/FM Provider must regularly inspect the worksite electrical reticulation system and any associated plant.

776. DEI will regularly spot-inspect the worksite's electrical reticulation system and any associated plant and regularly audit the Contractor/FM Provider's inspection regime.

REPORTING

777. After inspections the Contractor/FM Provider must record the results and make them available to DEI on request.

TEMPLATES

16.3 Worksite Electrical Inspection checklist
Permit to Work form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Electrical (Safety) Regulations 2010
Electrical safety on small construction sites WorkSafe New Zealand, March 2018,
Guidelines for the Provision of Facilities and General Safety I the Construction Industry, Occupational Safety & Health Service, Department of Labour, October 1995
RCDs, PSOAs, leads, cords, plus and battery-operated equipment, WorkSafe New Zealand, March 2018
AS/NZS 3000:2018 Electrical installations Australian/New Zealand wiring rules

AS/NZS 3000:2018 Electrical installations – Australian/New Zealand wiring rules
AS/NZS 3012:2019 Electrical installations – Construction and demolition sites

16.4 Driver Safety

POLICY

778. The Contractor/FM Provider must ensure worksite workers drive in and out of the camp or base safety. That includes all drivers involved in any aspect of the construction or maintenance project, as well as drivers for 3rd party plant and equipment suppliers.

SPECIFICATIONS

779. The Contractor/FM Provider must ensure that:

a. Drivers have the right training for the vehicles they are driving and New Zealand driver licenses with the appropriate endorsements for those vehicles;
b. Designated passenger vehicle drivers (not subject to hire/reward arrangements) are registered as appropriate;
c. Drivers know how to use the safety equipment required for their vehicles, e.g. seat belts in vehicles, helmets and other protective clothing for quad-bike users, and high visibility clothing and other equipment by drivers and passengers needing to exit their vehicles, particularly at night;
d. Passenger vehicles only carry the number of passengers for which the vehicle has safety belts;
e. Drivers comply with driving hours restrictions for passenger and heavy vehicles;
f. Driver logs are maintained;
g. Drivers do not drive in restricted areas unless authorised; and
h. A driver qualification register is established and maintained.

AUDIT/INSPECTION

780. The Contractor/FM Provider must regularly inspect driver qualifications

781. DEI will regularly spot-inspect worksite drivers, and regularly audit the Contractor/FM Provider's inspection process.

REPORTING

782. The Contractor/FM Provider must make the results of inspections available to DEI on request.

TEMPLATES

16.4 Driver and Vehicle Inspection Checklist
4.9 Training and Competency Inspection Checklist
Training and Competency Register

REFERENCES

Land Transport (Driver Licensing) Rule 1999
Land Transport (Road User) Rule 2004
Land Transport Rule: Work Time in Large Passenger Vehicles 2019, NZ Transport Agency, April 2019
Work time and log books for small passenger service drivers, NZ Transport Agency, October 2019
Your safe driving policy, NZTA/ACC, August 2007

16.5 Contractor/FM Provider and Worker Vehicles

POLICY

783. The Contractor/FM Provider is responsible for ensuring that all worksite vehicles comply with the relevant road safety rules.

SPECIFICATIONS

784. The Contractor/FM Provider must ensure that:

a. Contractor/FM Provider vehicles are maintained, fit-for-purpose and road-legal;
b. Contractor/FM Provider vehicle logs (where they are required) are maintained;
c. Worker's personal vehicles used for work purposes are road-legal, safe and suitable for their task/s;
d. Contractor/FM Provider vehicles are loaded within their specified weight limits;
e. Contractor/FM Provider vehicles loads are properly secured;
f. All items carried inside vehicle passenger cabins are secured to prevent unintended free movement in the event of a collision or rollover;
g. Contractor/FM Provider vehicles are fitted with a fire extinguisher, a first aid kit, a working torch, a reflective vest and an emergency triangle;
h. Audible reversing beacons are fitted and operational on all contractor HT Class 3, 4, and 5 vehicles and fork hoists; and
i. Contractor/FM Provider vehicles are clearly marked with the company name.

AUDIT/INSPECTION

785. The Contractor/FM Provider must regularly inspect contractor and worker vehicles for compliance with the CHESS specifications, referring to the checklist listed below for guidance.

786. DEI will regularly spot-inspect the worksite for compliance with the specifications, using the Driver and Vehicle Inspection checklist.

787. DEI will regularly audit the Contractor/FM Provider's vehicle inspection processes.

REPORTING

788. The Contractor/FM Provider must make the results of inspections available to DEI on request.

TEMPLATES

16.4 Driver and Vehicle Inspection checklist

REFERENCES

Land Transport Rule: Heavy Vehicle Brakes 2006
Land Transport Rule: Heavy Vehicles 2004
Land Transport Rule: Operator Licensing 2017
Land Transport Rule: Passenger Service Vehicles 1999
Land Transport Rule: Seatbelts and Seatbelt Anchorages 2002
Land Transport Rule: Vehicle Dimensions and Mass 2016
Land Transport Rule: Vehicle Equipment 2004
Land Transport Rule: Vehicles Standards Compliance 2002
Land Transport Rule: Work Time and Logbooks 2007

16.6 Contractor/FM Provider & Worker Vehicle Parking

POLICY

789. The Contractor/FM Provider is responsible for managing contractor and worker vehicle parking in conjunction with DEI. DEI will notify the camp or base parking rules to the Contractor/FM Provider.

790. DEI will arrange sufficient parking space to park worker and contractor vehicles within a reasonable distance of the worksite unless the worksite is itself large enough to designate worker and contractor vehicle parking within its bounds.

791. Under the latter conditions, the Contractor/FM Provider is solely responsible for managing contractor and worker vehicle parking.

792. The movement of building materials and the movement of worksite self-propelled vehicles such as cranes is not affected by those arrangements, but unless required to work on the site or move materials to and from the site, all work vehicles should be parked in the designated parking area to ensure access routes are kept clear.

SPECIFICATIONS

793. The Contractor/FM Provider must ensure:

a. Contractor/FM Provider and worker vehicles are parked in authorised locations (e.g. not blocking emergency access) in compliance with the camp or base parking rules;

b. Workers reverse park their vehicles when using perpendicular parking bays; and

c. Workers understand the worksite parking arrangements (such as requiring contractors to reverse-park their vehicles where appropriate).

AUDIT/INSPECTION

794. The Contractor/FM Provider must regularly inspect Contractor/FM Provider and Worker vehicle parking to determine compliance with the camp or base parking rules, referring to the checklist listed below for guidance.

795. DEI will regularly spot-inspect the worksite for compliance with the specifications, using the Driver and Vehicle Inspection checklist and audit the Contractor/FM Provider's inspections.

REPORTING

796. The Contractor/FM Provider must make the results of inspections available to DEI on request

TEMPLATES

16.4 Driver and Vehicle Inspection checklist

16.7 Worksite Safety Barriers

POLICY

797. New Zealand Transport Agency's Code of Practice for Temporary Traffic Management applies to NZDF work sites and affected roads, with NZDF acting as the Road Controlling Authority for NZDF land, and NZTA or the relevant local authority acting as the Road Controlling Authority for roads outside the NZDF base or site.

798. The Contractor/FM Provider must protect persons near and on the worksite from hazards caused by construction or demolition work, and must use safety barriers at the worksite that are appropriate to the location, activity and hazard and related risks of the worksite environment.

799. When determining what safety barriers are appropriate to the worksite circumstances, the Contractor/FM Provider must prepare a Job Safety Analysis.

SPECIFICATIONS

Traffic Safety Barriers

800. The Contractor/FM Provider must use traffic safety barriers appropriate to the circumstances of the worksite to:

a. Prevent traffic conflicts;
b. Protect road users from site hazards e.g. excavations;
c. Protect site workers and plant and equipment from road traffic; and
d. Separate pedestrians and cyclists from site and road hazards.

Construction/Demolition Site Barrier Fencing

Worksite Access Points

801. The Contractor/FM Provider must ensure:

a. Worksite access pathways are easily identified, clearly delineated and maintained;
b. Worksite access point/s to barricaded areas display contact details of supervisors or managers authorised to allow access to the area;
c. Pedestrian access points are clearly demarcated from vehicles access points, are signposted and lead to the worksite office; and
d. Worksite access points are clear of any hazards or obstructions (e.g. trip hazards).

Containment Fences

802. The Contractor/FM Provider must place containment fences or other barriers around areas where workers and the public may be exposed to dangers including but not limited to:

a. Being struck by falling objects;
b. Falling into open excavations;
c. Hazardous, toxic or flammable substances/storage areas/spills;
d. Being struck by plant or equipment;
e. Unauthorised or accidental entry into confined spaces;
f. Potentially hazardous work environments;
g. Hot or cold substances or surfaces; or
h. Where a JSA or the HAZID Analysis Register indicates that PPE is required.

Fence Dimensions

803. The Contractor/FM Provider must use containment fences or other barriers that have appropriate dimensions and design that prevent:

a. Site hazards falling onto people or property on or off the worksite;
b. Other worksite hazards affecting people on and off the worksite and in other property; and

c. Unauthorised entry by adults or children onto the worksite.

Other Requirements

804. The Contractor/FM Provider must ensure:

a. Structures that projects into access ways or work areas are protected (e.g. caps placed on Waratah pickets) so as to prevent injury;
b. Containment fences or other barriers are clearly marked and do not create a hazard to people or vehicles via any projections or encroachments;
c. Barricades are inspected daily;
d. The containment fence or other barrier is not less than one metre from the edge of any excavation; and
e. All barriers must be set up and secured to prevent reasonably foreseeable movement and interference.

Wind and Windbreak Fencing

805. Because of their locations, NZDF Camps and Bases are often subject to strong prevailing winds and dry conditions.

806. To prevent dust and other debris from the worksite affecting the surrounding spaces, buildings, structures, and NZDF mobile and non-mobile assets, the Contractor/FM Provider must:

a. Erect appropriate wind and windbreak fencing; and
b. Apply dust control measures during dry conditions.

AUDIT/INSPECTION

807. The Contractor/FM Provider must regularly inspect the worksite safety barriers to ensure they are fit-for-purpose.

808. DEI will regularly spot-inspect worksite barriers for compliance with the specifications using the checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

809. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATES

16.7 Barriers and Signage Inspection Checklist

REFERENCES

NZ Building Code Clause F5 – Construction and Demolition Hazards
Code of Practice for Temporary Traffic Management, NZ Transport Authority, November 2018
AS 1742.3 Manual of Uniform Traffic Control Devices, Part 3: Traffic Control Devices for Works on Roads
AS 3845 Road Safety Barrier Systems
AS/NZS 3845.1.2015 Road Safety Barrier Systems and Devices – Part 1: Road safety barrier systems
AS/NZS 3845.2.2017 Road Safety Barrier Systems and Devices – Part 2: Road Safety Devices -

16.8 Worksite Signage

POLICY

810. The Contractor/FM Provider must use suitable signs on the worksite to:

    a. Notify and warn workers and visitors of the site hazards and risks;
    b. Deter unauthorised entry to the worksite; and
    c. Direct visitors to the correct entrance.

SPECIFICATIONS

811. Worksite signs must be visibly displayed at:

    a. Site entrances;
    b. Onsite hazards, such as hazardous substances stores;
    c. Hazardous work on the worksite, such as crane work; and on
    d. Exterior fences and hoardings.

812. Those signs must be appropriate for the site location, hazard or risk, fit-for-purpose, and understandable and visible to the target audience.

813. Information signs must be on all outward faces of containment fences or other barriers, stating the:

    a. Name of the contractor erecting the barricade;
    b. Company name;
    c. Date and time the barrier was erected; and
    d. Purpose of barricade.

814. Signs at access point/s to fenced and barricaded areas must display contact details of supervisors or managers authorised to allow access to the area.

815. Hazard, warning and danger signage indicating hazardous sites and areas must be prominently displayed and contain the appropriate information in line with NZS/AS 1319.

816. Signs must be secured against wind movement to eliminate the risk of becoming a projectile.

817. Worksite signs must be maintained, repaired or replaced as required.

AUDIT/INSPECTION

818. Except as noted below, the Contractor/FM Provider must regularly inspect the worksite signs using the Barriers and Signage Inspection checklist as a guide, changing or removing them when the hazard or risk is no longer applicable, and installing new signs to notify and warn workers and visitors of any new hazards or risks on the worksite.

819. The Contractor/FM Provider must inspect barricade signage daily.

820. DEI will regularly inspect worksite signage for compliance with the specifications and audit the Contractor/FM Provider's inspection process.

REPORTING

821. The Contractor/FM Provider must make the inspection results available to DEI on request.

TEMPLATE

16.7 Barriers and Signage Inspection Checklist

REFERENCES

NZS/AS 1319:1994 Safety signs for the occupational environment

16.9 Worksite Lighting

POLICY

822. The Contractor/FM Provider is responsible for preparing and implementing a worksite lighting scheme (where appropriate to the worksite circumstances) that ensures the right levels of light for the worksite.

823. The Contractor/FM Provider may engage lighting designers to design worksite lighting schemes.

SPECIFICATIONS

Overall Worksite

824. The Contractor/FM Provider must ensure the worksite lighting scheme:

    a. Provides good levels of ambient indirect light, suitable to ensure essential task details are made easy to see;
    b. Generates no adverse factors such as dazzle, visual discomfort, disorientation, and visual fatigue;
    c. Meets the needs of after-hour workers; and
    d. Meets relevant lighting standards and guidelines.

825. The Contractor/FM Provider must ensure adequate lighting is provided for all work areas, and worker amenities, including:

    a. Vehicle parking;
    b. Storage facilities;
    c. On or near elevated work platforms and scaffolding in use; and
    d. Excavations and confined spaces.

Access and Stair Lighting

826. The Contractor/FM Provider must ensure effective and appropriate lighting for worksite access walkways and stairs .

Emergency Lighting

827. The Contractor/FM Provider must arrange and install emergency lighting (where appropriate to the worksite) as part of the site emergency evacuation procedure. That includes independently powered lighting and internally illuminated exit signage in:

    a. Access ways;
    b. Stairways, and
    c. Next to switchboards and other essential work site plant and equipment.

Construction Stage Reviews

828. The Contractor/FM Provider must review and amend the lighting scheme at the end of construction stages to minimise risks to workers, including regularly reviewing the positioning of emergency lighting and signage as the worksite changes over the course of the project.

AUDIT/INSPECTION

829. The Contractor/FM Provider must regularly inspect the worksite lighting system, and repair or replace any elements not working or not meeting the purpose of the lighting scheme.

830. DEI will regularly spot-inspect the worksite lighting scheme, and audit the Contractor/FM Provider's inspection process.

REPORTING

831. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

General Site Inspection Checklist

REFERENCES

Guidelines for the Provision of Facilities and General Safety in the Construction Industry, Occupational Safety & Health Service, Department of Labour, October 1995

AS 2293.1:2018 Emergency escape lighting and exit signs for buildings – System design, installation and operation
AS/NZS 2293.2:2019 Emergency lighting and exit signs for buildings – Part 2: Routine service and maintenance
AS 2293.3:2018 Emergency escape lighting and exit signs for buildings – Emergency escape luminaries and exit signs
AS/NZS 1680.2.4:2017 Interior lighting- Industrial tasks and processes
AS/NZS 1680.5:2012 Interior and workplace lighting: Part 5 Outdoor workplace lighting

16.10 Electrical Safe Distances

POLICY

832. The Contractor/FM Provider must ensure worksite activities observe the safe distances required near:

    a. Overhead electricity lines supports;
    b. Conductors;
    c. Exposed live parts; and
    d. Overhead telecommunication lines.

833. The Contractor/FM Provider must observe the limits for the installation of conductors near existing buildings and similar structures.

834. Electrical safe distances must be followed as defined in NZECP 34:2001.

SPECIFICATIONS

Excavation or Construction near Overhead Electricity Line Supports

835. The Contractor/FM Provider must obtain written consent from the pole owner or tower owner for:

    a. Any work or interference with the land near standing electrical network structure that plans to excavate a hole deeper than 300mm within 2.2 metres, or deeper than 750mm between 2.2 metres and 5 metres of the pole of stay wire. This rule does not apply to vertical holes less than 500mm in diameter beyond 1.5 metre of the pole or stay wire;
    b. Any excavation or interference with the land where the work is at a greater depth than 300mm within 6 metres of the visible foundation of the tower or is at a greater depth than 3 metres between 6 metres and 12 metres of the outer edge of the outer edge of the visible foundation of the tower; and
    c. Any work creating an unstable batter.

836. The written consent must be attached to a *Permit to Work* application.

837. The above requirements do not apply to agricultural cultivation or the repair, sealing or resealing of the existing surface of any road, footpath or driveway.

Installation of Conductive Fences or Buildings or Similar Structures near Overhead Electric Line Supports

838. The Contractor/FM Provider must ensure that fences of any conductive material are not:

    a. Attached to any tower or conductive pole of a high voltage overhead line;
    b. Constructed within 2.2 metres of any tower of conductive pole of a high voltage;
    c. overhead electric line between 1 kV – 50kV; and
    d. Constructed within 5 metres of any tower of conductive pole overhead line of 66kV or greater without the written permission of the owner of the tower or pole, and the owner may prescribe the design of any fence constructed with the 5 metres distance.

839. Where the construction of an overhead line would contravene the above requirements, the line owner must carry out an engineering study and undertake such remedial work required to maintain electrical safety.

840. The Contractor/FM Provider must ensure that no building or similar structure is erected closer to a high voltage overhead electric line support structure than the distances specified below, measured from the closest visible edge of the overhead electric line support foundation and the nearest point of the outermost part of the building or structure.

Approved Code of Practice: Maintenance of trees around powerlines, Occupational Safety and Health

Circuit Voltage	Pole	Tower (Pylon)
11 kV to 33kV	2 metres	6 metres
Exceeding 33kV to 66 kV	6 metres	9 metres
Exceeding 66 kV	8 metres	12 metres

Use of Mobile Plant near Conductors

841. The Contractor/FM Provider must ensure that mobile plant operators operating near overhead electricity lines maintain a minimum safe distance of four (4) metres between any live overhead line and any part of any mobile plant, unless the operator has the written consent of the overhead electric line owner allowing a reduced distance. The Contractor/FM Provider must ensure operators are aware that wind and temperature change can displace the lines.

842. Where consent for reduced distances exists, then the following table applies:

Circuit Voltage	Minimum Approach Distance (metres)
Not exceeding 1 kV – insulated conductor	0.15
Not exceeding 1 kV –conductor not insulated	1.0
Exceeding 1 kV but not exceeding 66 kV	1.0
Exceeding 66 kV but not exceeding 110 kV AC or DC.	1.5
Exceeding 110 kV but not exceeding 220 kV AC or DC.	2.2
Exceeding 220 kV but not exceeding 270 kV AC or DC.	2.3
Exceeding 270 kV but not exceeding 350 kV AC or DC.	2.8
Exceeding 350 kV DC or 220 kV AC	4

843. The Contractor/FM Provider must ensure that owners and/or operators of mobile plant in use in the proximity of overhead electric lines ensure that mobile plant conspicuously displays an approved warning notice in the operator's position stating 'Warning, Keep Clear of Power Lines'.

Minimum Safe Distance for Persons Working near Exposed Live Parts

844. The Contractor/FM Provider must ensure that workers observe minimum distances from exposed live parts.

845. The minimum distances for non-competent persons to work near exposed live parts is 4 metres for circuit voltages of 110 kV and below and 6 metres for circuit voltages above 110 kV.

846. For non-competent persons working with the written consent of the owner of the live parts the minimum safe distance is:

Circuit Voltage	Distance Limit (Metres)
Below 1 kV	0.5
11 kV	1.5
22 kV	2.0
33 kV	2.5

66 kV	3.0
110 kV	4.0
220 kV and above	6.0

847. For competent persons the minimum safe approach distance carrying out electrical or telecommunications work near exposed live parts shall not be less than those set out in the table below:

Nominal Voltage	Distance Limits (Metres)
Not exceeding 1 kV AC or DC.	0.15
Exceeding 1 kV but not exceeding 6.6 kV AC or DC.	0.25
Exceeding 6.6 kV but not exceeding 11 kV AC or DC.	0.3
Exceeding 11 kV but not exceeding 22 kV AC or DC.	0.45
Exceeding 22 kV but not exceeding 33 kV AC or DC.	0.6
Exceeding 33 kV but not exceeding 50 kV AC or DC.	0.75
Exceeding 50 kV but not exceeding 66 kV AC or DC.	1.0
Exceeding 66 kV but not exceeding 110 kV AC or DC.	1.5
Exceeding 110 kV but not exceeding 220 kV AC or DC.	2.2
Exceeding 220 kV DC but not exceeding 270 kV DC.	2.3
Exceeding 270 kV DC but not exceeding 350 kV DC.	2.8
Exceeding 220 kV AC or 350 kV DC.	4.0

848. Safe approach distance is defined as the shortest distance between any part of the person's body or any object carried by that person and the exposed live part.

849. All work within the minimum safe approach distances requires a *Permit to Work*, a trained safety observer to be present, and written consent from the network owner.

Other Safe Distances

850. The Contractor/FM Provider must ensure that workers comply with the NZ Electrical Code of Practice for Electrical Safe Distances (ECP 34:2001) for:

a. Safe distances between conductors and buildings;
b. Safe distances of conductors above the ground and over water;
c. Safe distances for conductors of different circuits;
d. Designing and installing supports and stay wires of overhead electric lines and control of access; and
e. Designing substations, generating stations, switchyards and switch rooms.

AUDIT/INSPECTION

851. The Contractor/FM Provider must regularly inspect the worksite to ensure observance of minimum safe distances by workers and safety observers are present where required.

852. DEI will regularly spot-inspect the worksite to measure compliance with minimum safe distances by workers, and DEI will regularly audit the Contractor/FM Provider's inspection process.

REPORTING

853. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.8 Mobile Plant and Equipment Inspection checklist
16.7 Barriers and Signage Inspection checklist
16.3 Worksite Electrical Inspection checklist

REFERENCES

Approved Code of Practice: Maintenance of trees around powerlines, Occupational Safety and Health Service, Department of Labour, February 1996
Electricity (Safety) Regulations 2010
Electricity Act 1992
NZ Electrical Code of Practice for Electrical Safe Distances, Ministry of Consumer Affairs, 2001
NZECP 34:2001

16.11 Worksite Visitors

POLICY

854. The Contractor/FM Provider is responsible for ensuring the presence of visitors on the worksite does not generate risks for visitors or workers.

SPECIFICATIONS

855. The Contractor/FM Provider must:

a. Establish and manage a Site Visitor/Induction Register, using the template below, recording the entry and exit of visitors from the worksite;
b. Induct all worksite visitors in the health and safety requirements for the worksite;
c. Ensure visitors to the worksite are escorted by someone who has received the full worksite induction and is familiar with the operations on the worksite;
d. Ensure visitors wear appropriate personal protection equipment, including high visibility clothing, and safety headwear;
e. Ensure visitors do not interfere with worksite operations or through action or inaction place adversely affect the health and safety of others on the worksite;
f. Ensure visitors follow any reasonable instruction from their escort or other worker; and
g. Ensure visitors do not work on the worksite.

AUDIT/INSPECTION

856. The Contractor/FM Provider must regularly review the visitor management process to ensure compliance with CHESS specifications.

857. DEI will regularly spot-inspect the worksite for compliance with the specifications and audit the Contractor/FM Provider's compliance with these specifications.

REPORTING

858. The Contractor/FM Provider must make the Worksite Visitor/Induction Register available to DEI on request.

TEMPLATES

Worksite Visitor/Induction Register
4.9 Training and Competency Inspection checklist

REFERENCES

WorkSafe Position - Visitors at work, WorkSafe New Zealand, February 2019

16.12 After-Hours Tasks

POLICY

859. DEI or FM Provider worksites occasionally require work to happen after camp or base normal working hours. Examples of such work include concrete pours, urgent utilities or facilities maintenance, and so on.

SPECIFICATIONS

860. To ensure healthy and safe work in the course of after-hours tasks, the Contractor/FM Provider must ensure that:

a. DEI has notified the OIC Defence Area;
b. Sufficient additional supervision is provided for the after-hours task;
c. Workers working beyond normal shift hours are monitored for fatigue, and take required rest and food breaks over the course of the after-hours work; and
d. For tasks that require hours in excess of two normal shifts, the Contractor/FM Provider ensures that fresh workers replace fatigued workers as required to undertake the after-hours task.

AUDIT/INSPECTION

861. The Contractor/FM Provider must inspect after-hours works and the workers to measure compliance with CHESS specifications.

862. DEI will regularly spot-inspect the after-hours work to determine compliance with the specifications, and will audit the Contractor/FM Provider's inspection process.

REPORTING

863. The Contractor/FM Provider must make inspection results available to DEI on request.

TEMPLATES

16.12 After-Hours Tasks Inspection checklist

REFERENCES

Fatigue, WorkSafe New Zealand, July 2017
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
Managing the risks of shift work, Guidance for PCBUs, WorkSafe New Zealand, April 2021

17 SAFE METHODS OF WORK

INTRODUCTION

864. *Safe Methods of Work* sets out DEI health and safety expectations for the Contractor/FM Provider for common and potentially hazardous worksite activities.

17.1 Ground Disturbance Investigations

POLICY

865. The Contractor/FM Provider must ensure workers conducting ground disturbance investigations do so safely and in accordance with relevant legislation, approved codes of practice, WorkSafe New Zealand and other guidance documents, and standards.

866. DEI will provide the Contractor/FM Provider with a Site Information Pack (as per 2.3 and 2.4 of the New Zealand Ground Investigation Specification) and amend it as required to reflect the worksite.

SPECIFICATIONS

867. The Contractor/FM Provider must ensure that workers undertaking ground disturbance investigations have the necessary training, experience, equipment and plant to perform the work without risking themselves or others in the process.

868. Prior to any excavation work, the Contractor/FM Provider must seek DEI Environmental Services advice and apply for and receive a *Permit to Work*.

869. The Contractor/FM Provider must also ensure:

a. The preparation of a Job Safety Analysis for the task, and that appropriate risk management methods are applied to the task, e.g. controlling, eliminating or minimising risks associated with:
   (1) Equipment siting, setup and operation;
   (2) Transport and offloading of equipment;
   (3) Storage of plant, equipment, and any fuel storage needed;
   (4) Excavations, including placement of excavated materials, and positioning of excavation machinery;
   (5) Explosives in seismic testing;
   (6) Site noise, such as rig generator, safety hammers, and dynamic cone penetration testing;
   (7) Dust and mud;
   (8) Collection and offsite disposal of drilling muds, additives, or foam returns;
   (9) Management of sediment or silt run off (within existing NZDF discharge consents);
   (10) Underground and overhead services;
   (11) Traffic movement (traffic management plan – integrated with the Traffic Management Plan);
   (12) Other activities on the worksite; and
   (13) Environmental conditions.

b. The task has the equipment and plant needed for the task and appropriate precautions are taken to ensure worker safety during the transport, site preparation and erection of investigative equipment, including drilling rigs, and mobile excavation equipment;

c. Provision has been made for parking for vehicles and other facilities on the worksite;

d. The preparation of emergency plans and procedures, including first aid; and

e. Exclusion and safety zones, covered walkways, site barriers, such as posts, fencing, hoarding, and safety mesh or danger tape, and signage.

AUDIT/INSPECTION

870. The Contractor/FM Provider must regularly inspect ground disturbance works and the workers to measure compliance with the specifications.

871. DEI will regularly spot-inspect the ground disturbance works to determine compliance with the specifications, and audit the Contractor/FM Provider's inspection process.

REPORTING

872. The Contractor/FM Provider must make its inspections results available to DEI on request.

TEMPLATES

17.1 Ground Disturbance Works Inspection Checklist
Permit to Work Application Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Good Practice Guidelines - Excavation safety, WorkSafe New Zealand, July 2016
Contaminated land management guidelines No 1 – Reporting on contaminated sites in New Zealand, Ministry for the Environment, June 2021
New Zealand Ground Investigation Specification, Volume 0: Commentary, Introduction and Guidance, Auckland Council*, April 2017*
New Zealand Ground Investigation Specification – Master Specification, Auckland Council, April 2017
AS 1726:2017 Geotechnical Site Investigations
AS.NZS 4024 Series
AS/NZS 5667 Water Quality – Sampling
ASTM D2113-06 Practice for diamond core drilling for site investigation
NZS 4411:2001 Environmental Standard for Drilling of Soil and Rock
NZ Utilities Advisory Group (Inc): National Code of Practice for Utility Operators' Access to Transport Corridors

17.2 Ground Disturbance Site Works

POLICY

873. The Contractor/FM Provider must ensure workers conducting ground disturbance site works do so safely and in accordance with relevant legislation, approved codes of practice, WorkSafe New Zealand and other guidance documents, and standards.

SPECIFICATIONS

874. Prior to any excavation work, the Contractor/FM Provider must apply for and receive a *Permit to Work and* engage with DEI Environmental Services to ensure compliance with all standing resource consents for the disturbance of contaminated soils.

875. The Contractor/FM Provider must ensure that the task's JSA identifies health and safety risk elimination and mitigations measures for::

a. Excavations deeper than 1.5 metres on potentially friable ground, such as sloping, benching, bracing, shoring and shields;
b. Backfilling; such as managing the impact loading on pipelines, shaft, structures, cabling or other buried elements;
c. Dynamic compaction, such as transport, set up, movement on the worksite, maintenance, managing crane stability during operations, and dismantling and removal;
d. Piling, such as, noise, vibration, contaminated risings and groundwater, injuries resulting from lifting, slewing, and pitching piling rigs and piling elements, and plant instability resulting from land gradients, ground conditions and/or inadequate bearing capacity;
e. Boring or drilling, such as securing and shoring bore pits with appropriate supports, ensuring safe bore pit access (secured ladder or ramp), and managing confined spaces work, and operating boring machines and underground piercing tools safely;
f. Site grading/rock and soil removal, such as managing cut or fill slopes, managing erosion, runoff and sedimentation after vegetation clearing, and managing vehicle loading and unloading;
g. Soil sampling, being excavation of soil to a depth of no greater than 300mm using approved hand tools, and may relate to a number of soil sampling tasks across a camp or base;
h. Landscaping, such as depositing fill and land and drainage restoration;
i. Managing atmospheric contaminants e.g. low oxygen or toxic gases in a trench;
j. Traffic congestion;
k. Movement and operation of heavy equipment and plant in the vicinity of excavations, such as diggers, cranes, graders etc.;
l. Worksite equipment and plant operations, including transport to and from the site, site storage, parking, and maintenance;
m. Worker safety, (such as additional supervisors, placing fall barriers in the vicinity of the trench, protecting excavator operators and exclusion zones around ground excavations and equipment swing areas);
n. Dust, contaminated soil, hazardous substances, and ground water[18];
o. Underground and overhead services;
p. Explosives operations and management (if required);
q. Moving, storing, and disposing of spoil;
r. Preventing damage to underground services, such as power lines and gas, water, sewage and liquid petroleum pipe systems; and
s. Using lifting equipment and manual handling to move large, heavy or awkward loads.

876. The Contractor/FM Provider must also ensure that:

[18] Environmental compliance measures must be discussed separately with DEI Environmental Services.

a. Subterranean services are located and are rendered safe or avoided;
b. Subterranean voids, water courses, hazardous waste and other potential hazards are identified before work commences;
c. Workers have the necessary training for the works and are provided with the appropriate PPE;
d. All equipment are mechanically sound, are regularly maintained, and are suitable for the task;
e. Equipment operates on a firm and level base, and/crane mats are used;
f. Workers moved by crane must be moved in purpose built cages, under power, with cranes fitted with dead man handles; and
g. Geotechnical site works do not endanger adjacent buildings.

AUDIT/INSPECTION

877. The Contractor/FM Provider must regularly inspect ground disturbance site works and the workers to measure compliance with the specifications.

878. DEI will regularly spot-inspect the ground disturbance site works to determine compliance with the specifications, and will audit the Contractor/FM Provider's inspection process.

REPORTING

879. The Contractor/FM Provider must its inspections results available to DEI on request.

TEMPLATES

17.1 Ground Disturbance Works Inspection checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Excavation Safety, WorkSafe New Zealand, July 2016
Earthquake geotechnical engineering practice - Module 3: Identification, assessment and mitigation of liquefaction hazards, Ministry of Business, Innovation & Employment, November 2021
Earthquake geotechnical engineering practice - Module 5: Ground improvement of soils prone to liquefaction, Ministry of Business, Innovation & Employment, November 2021
Electricity Engineers' Association (EEA) *Guide for Non-Electricity Industry Employees Using Mobile Plant near Power Lines and Electricity Cables*
New Zealand Electrical Code of Practice for Electrical Safe Distances (ECP34), Section 9
Health and Safety in Employment (Pipelines – Design, Construction, Operation, Maintenance, Suspension, and Abandonment Requirements) Safe Work Instrument 2023, WorkSafe New Zealand, June 2023

17.3 Demolition

POLICY

880. The Contractor/FM Provider must demolish structures and facilities on the Defence Estate in a safe manner.

SPECIFICATIONS

Demolition Process

881. The Contractor/FM Provider must ensure that the method or activity of the building or facility demolition does not:

a. Vary from the engineering advice on the demolition process, unless new advice is sought and received that supports a process variation;
b. Damage services, buildings or facilities in the vicinity of the demolition worksite;
c. Affect people and structures in the vicinity with undue noise and vibration;
d. Enable objects such as demolition debris to affect people in or outside the worksite;
e. Affect foot or traffic access to adjacent buildings or facilities in an undue manner; and
f. Cause an uncontrolled collapse of the building or facility that may endanger workers.

Emergency Plan

882. The Contractor/FM Provider must prepare an emergency response plan to manage any incidents on the demolition worksite.

Demolition Site Supervision

883. The Contractor/FM Provider must ensure that worksite supervision aligns with the *CSMP/FMSMP*'s requirements.

Permits to Work

884. The Contractor/FM Provider must obtain permits to work for those elements of the demolition process that require them.

Disconnection of Site Services

885. The Contractor/FM Provider must ensure disconnection of services to the worksite before demolition work begins.

Disposal and Recycling of Demolition Debris and Waste

886. The Contractor/FM Provider must ensure unrecyclable demolition debris and waste is disposed of safely, and recyclable material is processed appropriately in accordance with the DEI Waste Disposal and Recycling Policy.

Site Security & Acoustic Screening

887. The Contractor/FM Provider must ensure that the demolition worksite is secure, with site access restricted by the installation of appropriate fencing and screens.

888. To manage demolition noise, the Contractor/FM Provider must use acoustic screening where it is considered appropriate.

Workers and Equipment

889. The Contractor/FM Provider must ensure that workers engaged in demolition work are competent to perform their duties, with relevant qualifications for their respective duties.

890. The Contractor/FM Provider must ensure that tools, equipment and plant used on the demolition worksite are fit for purpose and serviced regularly.

Asbestos

891. As far as is reasonably possible, asbestos must be removed from buildings before demolition begins. Where asbestos is known to be present or is suspected of being present, and cannot be removed prior to demolition occurs, the Contractor/FM Provider must ensure workers involved in the demolition project have the necessary training, resources and PPE to minimise risks to themselves and everyone else near the buildings or structures undergoing demolition.

892. The Contractor/FM Provider must ensure that demolition tasks where asbestos is known to exist have an *approved Asbestos Removal Control Plan* in effect, as per the requirements of *Health and Safety at Work (Asbestos) Regulations 2016*.

893. Where asbestos is discovered during the course of a demolition project, the Contractor/FM Provider must stop work, secure the worksite, take appropriate measures to safely contain the asbestos, and apply Defence Estate Asbestos Management Plan mandated measures to remove the asbestos.

Dust & Air Quality Monitoring

894. The Contractor/FM Provider must establish effective dust controls that prevent dust runoff. Such measures may include but are not limited to water suppression or dry dust extraction and must consult with DEI Environmental Services for all controls required for dust management.

895. The Contractor/FM Provider must monitor air quality for airborne particulates such as dust and hazardous substances in the vicinity of the demolition worksite and make the results available to DEI on request.

Hazardous Substances

896. The Contractor/FM Provider must ensure that the project applies appropriate hazardous substance mitigation measures where there is a risk of the release of hazardous substances during demolition.

Drainage & Runoff

897. The Contractor/FM Provider must manage the drainage and runoff from the demolition worksite is to prevent the entry of sediment and hazardous substances into the environment, and must consult with DEI Environmental Services for all controls required for drainage and runoff management.

Personal Protective Equipment

898. The Contractor/FM Provider must ensure that workers use PPE appropriate to the task, such as hard hats, safety boots, eye protection, respiratory protection and so on, and that PPE supplied to workers works correctly e.g. respirators and dust masks must fit and achieve good face seals.

899. The Contractor/FM Provider must also ensure workers do not take dusty work clothes from the worksite, and must enable workers to be able to change their clothes, and where circumstances require it, provide laundering, washing and/or showering facilities on site.

Worker Health Monitoring

900. The Contractor/FM Provider must provide health monitoring for their workers, including lung function testing, within the constraints of the Privacy Act 1993.

AUDIT/INSPECTION

901. The Contractor/FM Provider must regularly inspect demolition site works to measure compliance with the specifications.

902. DEI will regularly spot-inspect demolition site works to determine compliance with the specifications, and will audit the Contractor/FM Provider's inspection process.

REPORTING

903. The Contractor/FM Provider must record its demolition site works inspections, referring to the checklist listed below for guidance, and make its records available to DEI on request.

TEMPLATES

16.7 Barriers and Signage Inspection checklist
18.3 Waste Management Inspection checklist
10.2 Workers and Equipment Inspection checklist
16.2 Isolation Inspection checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCE

Approved Code of Practice – Management and Removal of Asbestos, November 2016
Compliance Document for New Zealand Building Code Clause F5 Construction and demolition hazards, Department of Building and Housing, 2006
Controlling silica dust in the workplace/Te kaupare atu I te puehu takawai I te wāhi mahi, WorkSafe, August/Ākuhata 2019
Dusty work and use of controls among construction workers, WorkSafe New Zealand, April 2019
Dusty work and the use of controls among construction workers, WorkSafe, April 2019
Guidelines for Provision of Facilities and General Safety in the Construction Industry, Occupational Safety & Health Service, Department of Labour, October 1995
Wood dust: Controlling the Risks, WorkSafe New Zealand, January 2023
NZS 6801:1999 Acoustics-Measurement of Environmental Sound
NZS 6803:1999 Acoustics-Construction Noise
Health and Safety at Work (Asbestos) Regulations 2016

17.4 Building Lifting & Removal

POLICY

904. DEI is responsible for the care and maintenance of a number of historic buildings on the Defence Estate. For operational reasons it may choose to place a new building on the site of an existing building, and where possible, decide to relocate the existing building to a new site.

905. The Contractor/FM Provider must have the capability to successfully undertake the task.

SPECIFICATIONS

906. Where the project requires repair to a portion of the foundation of a building or facility, e.g. replacement of part of a ring foundation, the Contractor/FM Provider must ensure the CSMP includes:

    a. HAZID Analysis Register;
    b. Hazardous Substances Register;
    c. Requirement for JSAs to be created for lift and confined space tasks;
    d. Detailed training and competency register (including worker experience and relevant qualifications, e.g. Licensed Building Practitioner holding Foundation licence);
    e. Emergency Plan;
    f. Requirement for suitable lifting equipment with service and maintenance records; and
    g. Erosion and sediment control measures. Erosion and sediment control matters must be contained within the Environmental Management Plan for the works, which is reviewed by DEI Environmental Services..

907. Where the project requires the disconnection of the building and removes it from its current footprint or jacks, supports and stabilises the building, with the intent of workers and/or machinery operating beneath it, the Contractor/FM Provider undertaking this work must ensure:

    a. The work complies with AS/NZS 1170 Set – Structural Design Actions Set;
    b. A Producer Statement 1 and/or Producer Statement 2 for temporary structures prepared based on design, lifting equipment and ground disturbance equipment specific to the building or facility and site;
    c. Services to the building have been disconnected;
    d. A Building Inspection Report (if required by the local authority);
    e. The local authority has issued a building and/or resource consent for the work (if the building breaches the recession plane); and
    f. The workers have:
        (1) The requisite competency to lifting and moving buildings;
        (2) The requisite competency in related plant operation; and
        (3) A notification pursuant to regulation 26 of the Health and Safety in Employment Regulations 1995 (if the excavation is deeper than 1.5 metres.
    g. All documents are listed in a level 1 Best Practice Guideline for Heavy Haulage.

AUDIT/INSPECTION

908. The Contractor/FM Provider must regularly inspect building lift/removal site works to ensure compliance with the specifications.

909. DEI will regularly spot-inspect building lift/removal site works to determine compliance with the specifications, and audit the Contractor/FM Provider's inspection process.

REPORTING

910. The Contractor/FM Provider must make the results of its inspections available to DEI on request.

TEMPLATES

16.7 Barriers and Signage Inspection checklist
18.3 Waste Management Inspection checklist

10.2 Workers and Equipment Inspection checklist
16.2 Isolation Inspection checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Code of Practice for Manual Handling, ACC, Department of Labour, Occupational Safety & Health Service, June 2001
Approved Code of Practice for Noise in the Workplace, Department of Labour, Occupational Safety & Health Service, October 2002
Approved Code of Practice for Operator Protective Structures on Self-Propelled Mobile Mechanical Plant, Occupational Safety and Health Services, Department of Labour, February 1999
Confined Spaces: planning entry and working safely in a confined space, WorkSafe New Zealand, March 2020
Level 1 Lift Best Practice Guideline for Heavy Haulage documents
The Guide for Canterbury Builders for Below-Floor Work, Ministry of Business, Inovation and Employment, April 2013
AS 2865:2009 Confined Spaces
AS/NZS 1170:2002 Structural Designs Action Set

17.5 Concrete Structures

POLICY

911. The Contractor/FM Provider must ensure that concrete work on NZDF worksites occurs in a healthy and safe manner (See *Respirable Hazard Management*).

SPECIFICATIONS

Concrete Pumping

912. The Contractor/FM Provider must apply the *Concrete Pumping Health and Safety Guidelines* and also manage:

a. Worker safety processes during the concrete pour, including manual handling of plant and equipment and pump operator, placing crew, and ready-mix driver protection;
b. Equipment and plant proposed for the task;
c. Pump setup site and associated parking spaces for concrete trucks;
d. Collection of residue or waste, e.g. washout area and storm water protection;
e. Site noise;
f. Hazardous exhaust vapours in confined spaces;
g. Underground and overhead services;
h. Safe access around the pump during pumping;
i. Traffic movement as part of the project's Traffic Management Plan; and
j. Exclusion and safety zones, covered walkways and site barriers, such as fencing, hoarding, posts and safety mesh or danger tape, and signage.

Concrete Structures Using Formwork

913. The Contractor/FM Provider must apply the *Concrete Pumping Health and Safety Guidelines* and manage:

a. Construction of the formwork to ensure it:
   (1) Holds together during concrete pours;
   (2) Does not suffer explosive failure; and
   (3) Does not create dangerous flying debris should it do so.
b. Worker safety processes during the concrete pour, including manual handling of plant and equipment and pump operator, placing crew, and ready-mix driver protection;
c. Formwork system, equipment and plant proposed for the task;
d. Pump setup site and associated parking spaces for concrete trucks;
e. Collection of residue or waste, e.g. washout area and storm water protection
f. Site noise;
g. Hazardous exhaust vapours in confined spaces;
h. Underground and overhead services;
i. Traffic movement as part of the project's Traffic Management Plan;
j. Exclusion and safety zone, covered walkways and site barriers, such as fencing; and
k. Hoarding, posts and safety mesh or danger tape, and signage.

3D Printed Concrete Structures and Building Components

914. The Contractor/FM Provider must apply the *Concrete Pumping Health and Safety Guidelines* and also manage:

a. a. Transport and setup of the 3D printing equipment, including the movement and use of cranes and other equipment required to erect/set up the:
   (1) Extrusion printer; or

(2) Gantry; or

(3) Robotic arm/crane; and/or

(4) Associated equipment required for the 3D printing process.

b. Worker safety processes during the printing process, including manual handling of plant and printing equipment and printer operator, and ready-mix driver protection;

c. 3D printing equipment and other plant required for the operation of the task;

d. Pump setup site and associated parking spaces for concrete trucks;

e. Collection of residue or waste, e.g. washout area and storm water protection

f. Site noise;

g. Hazardous exhaust vapours in confined spaces;

h. Underground and overhead services;

i. Traffic movement as part of the project's Traffic Management Plan;

j. Restricting worker movement around the working printer and gantry; and

k. Exclusion and safety zone, covered walkways, site barriers, such as fencing, hoarding, posts and safety mesh or danger tape, and signage.

Precast Concrete Structures

915. The Contractor/FM Provider must apply the *Safe Work With Precast Concrete* guidelines and also manage the:

a. Site specific on-site and construction documentation;

b. Worker safety processes during transport and erection of the pre-cast panels, including those aimed at managing issues resulting from manual handling, worker fatigue, and accidents;

c. Equipment and plant proposed for the task with current test certificates;

d. Parking spaces for trucks;

e. Crane (and tailing crane) siting, setup and operation, as defined in 17.14 Lifting Equipment, Cranes & Load–Lifting Rigging, Crane-Lifted Work Platforms & Mobile Elevating Work Platforms (MEWP);

f. Rigging system;

g. Transport, offloading, crane movement, slinging, erection and securing of panels;

h. Mobile elevating work platforms;

i. Panel, plant, equipment, and fuel storage;

j. Site noise and dust;

k. Scaffolding and panel bracing;

l. Spraying sealing compounds;

m. Underground and overhead services;

n. Traffic movement as part of the project's Traffic Management Plan;

o. Weather conditions;

p. If casting on site, ensuring the production meets specifications, and that workers are not exposed to the substances commonly used in precast concrete manufacture (including concrete, curing compounds and release agents);

q. Emergency plans and procedures, including first aid;

r. Other activities on the worksite (this implies the existence of a CSMP, which does include an overall worksite safety plan and traffic management plan which will determine when precast concrete panels can be transported and erected); and

s. Exclusion and safety zones, covered walkways, site barriers, such as posts, fencing, hoarding, and safety mesh or danger tape, and signage.

AUDIT/INSPECTION

916. The Contractor/FM Provider must:

a. Determine that concrete reinforcing elements are complete, placed in accordance with the building plan, and meet the structural tensile strength requirements for the structure or facility before concrete is poured;
b. Ensure concrete cover of structural elements meets the planned requirements and is fit-for-purpose;
c. Test poured in-situ concrete structures after concrete had cured to 90%+ strength;
d. Test the strength of floor-wall connectors;
e. Check waterproofing of load bearing reinforced concrete structures exposed to water;
f. Test precast reinforced concrete structures for the required structural elements and strength;
g. Test concrete for the required compressive strength; and
h. Apply any other appropriate tests.

917. DEI will regularly spot-inspect concrete site works to determine compliance with the specifications, and audit the Contractor/FM Provider's inspection and testing process.

REPORTING

918. The Contractor/FM Provider must make the results of its inspections and tests available to DEI on request.

TEMPLATES

15.5 Concrete Site Works Inspection checklist
16.7 Barriers and Signage Inspection checklist
10.2 Workers and Equipment Inspection checklist
17.14 Cranes and Lifting Equipment Inspection checklist
Permit to Work form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Concrete Pumping Health and Safety Guidelines, Ministry of Business, Innovation & Employment, February 2013
Concrete Truck Driver Hand Signals, NZ Ready Mixed Concrete Association Inc.
New Zealand Guide to Concrete Construction, Cement & Concrete Association of New Zealand, 2010
General Guide for Formwork and Falsework, Safe Work Australia, July 2014
Health and Safety at Work (Hazardous Substances) Regulations 2017
Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999
Health and Safety in Employment Regulations 1995
Safe work with precast concrete, WorkSafe New Zealand, October 2018

17.6 Lightweight & Heavyweight Framed & Prefabricated Structures

POLICY

919. The Contractor/FM Provider must ensure that construction of framed and prefabricated structures occurs in a healthy and safe manner, and must ensure that workers working with prefabricated components manufactured off-site have the necessary training, experience and PPE to perform the work without risking themselves or others in the process.

SPECIFICATIONS

920. The Contractor/FM Provider must apply the relevant construction guidelines and also manage the:

    a. Required worker training, experience, and PPE to perform the work without risking themselves or others in the process;
    b. Worker safety processes during transport and erection of the prefabricated structural, framing, joinery, roofing, components, including those aimed at managing issues resulting from manual handling, operating and working with cranes, working at heights, worker fatigue, and accidents;
    c. Equipment and plant proposed for the task (with current test certificates);
    d. Parking spaces for vehicles;
    e. Crane siting, setup and operation as defined in 17.14 Lifting Equipment, Cranes & Load–Lifting Rigging, Crane-Lifted Work Platforms & Mobile Elevating Work Platforms (MEWP);
    f. Rigging system for craned components;
    g. Transport, offloading, crane movement, slinging, erection and storage of structural and framing components;
    h. Scaffolding;
    i. Mobile elevating work platforms;
    j. Building component storage, plant, equipment, and fuel storage;
    k. Site noise and dust;
    l. Underground and overhead services;
    m. Traffic movement as part of the project's Traffic Management Plan;
    n. Weather conditions;
    o. Emergency plans and procedures, including first aid; and
    p. Exclusion and safety zones, covered walkways, site barriers, such as posts, fencing, hoarding, and safety mesh or danger tape, and signage.

921. Before work commences on the site DEI provides the Contractor/FM Provider with all available information about the site, nearby underground and overhead services and the work done to date in and around the site as part of the Permit to Work documentation.

AUDIT/INSPECTION

922. The Contractor/FM Provider is responsible for ensuring the lightweight and heavyweight framed and prefabricated structural components are:

    a. Fit for purpose;
    b. Correctly positioned and connected; and
    c. Capable of providing the vertical, horizontal and torsion strength requirements needed by the building or facility.

923. The Contractor/FM Provider must regularly inspect lightweight and heavyweight framed and prefabricated site works to measure compliance with the specifications.

924. DEI will regularly spot-inspect lightweight and heavyweight framed and prefabricated site works to determine compliance with the specifications, and audit the Contractor/FM Provider's inspection process.

Reporting

925. The Contractor/FM Provider must make its inspections results available to DEI on request.

Templates

14.7 Barriers and Signage Inspection checklist
17.14 Cranes and Lifting Equipment Inspection checklist
17.7 Scaffolding Inspection checklist
10.2 Workers and Equipment Inspection checklist
Permit to Work Form

Processes and Procedures

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

References

Acceptable Solution B1/AS1 (Amd 21): General
AS/NZS 1576:2000 Scaffolding
AS/NZS 4389:2015 Roof safety mesh
BS 8411:2019 – Safety nets on construction sites and other works. Code of practice
NZS 3602:2003 Timber and wood-based products
NZS 3603:1993 Timber Structures Standard
NZS 3604:2011 Timber-framed buildings handbook
SNZ PAS 4244:2003 Insulation of lightweight-framed and solid-timber houses

17.7 Scaffolding & Temporary Work Platforms

POLICY

926. The Contractor/FM Provider is responsible for the safe erection, maintenance, deconstruction and use of scaffolding, including mobile scaffolding, and temporary work platforms on DEI worksites.

927. The Contractor/FM Provider must ensure that workers use scaffolding and temporary work platforms when they best meet the needs of workers to perform specific tasks on the worksite and must ensure the workers performing those functions have the necessary training to do so

928. The Contractor/FM Provider must ensure workers do not apply unsafe temporary solutions when scaffolding or a temporary work platform will provide a safer task outcome.

929. The Contractor/FM Provider must apply the WorkSafe New Zealand Positions by Height of Scaffolding (refer *to Scaffolding in New Zealand – Good Practice Guidelines* for more information) when determining what solutions are appropriate to the worksite conditions.

SPECIFICATIONS

930. The Contractor/FM Provider must apply the relevant guidelines and also manage the:

a. Worker safety processes during transport and erection of scaffolding components, including those aimed at managing issues resulting from manual handling, worker fatigue, and accidents;
b. Equipment and plant proposed for the task;
c. Parking spaces for vehicles;
d. Scaffolding construction and operation;
e. Rigging system for craned scaffolding components;
f. Transport, offloading, crane movement, slinging, erection and storage of scaffolding components;
g. Mobile elevating work platforms used for scaffolding construction;
h. Scaffolding component storage;
i. Site noise;
j. Underground and overhead services;
k. Traffic movement as part of the project's Traffic Management Plan;
l. Weather conditions;
m. Emergency plans and procedures, including first aid; and
n. Exclusion and safety zones, covered walkways, site barriers, such as posts, fencing, hoarding, and safety mesh or danger tape, and signage.

931. When erecting and using scaffolding, the Contractor/FM Provider must ensure:

a. Scaffolding inspection tags are secured to all access points and clearly visible;
b. Scaffolding is inspected and tagged in-use every 7 days;
c. Monthly inspections and tagging of scaffolding not in use;
d. Inspection and tagging of all scaffolding after severe storm or earthquake events;
e. Entry and exit points are clear of all obstructions;
f. Exclusion zones are in place and relevant signs are posted;
g. All working platforms are fully decked and decking is secured to prevent movement;
h. Load bearing fittings are used with all scaffold ties in place;
i. Platforms are free from any protrusions;
j. Working platforms are clear of obstructions;
k. Housekeeping is regularity conducted;
l. Materials in use are stored correctly and not overloading the scaffold;
m. Wrapped scaffolding is signed off by an engineer (with the certificates and engineering design plans available on request by a DEI official);
n. Toe boards are fitted unless removed in accordance with a Specification Amendment;

o. Installation of self-closing guard rails where applicable;
p. Installation of edge protection and screening to protect against dropped objects; and
q. Mobile scaffolding is not transited with persons on board.

INSPECTION/AUDIT

932. The Contractor/FM Provider must regularly (or as required above) inspect the scaffolding and temporary work platforms in use on the worksite.

933. DEI will regularly spot-inspect the scaffolding and temporary work platforms used on the worksite for compliance with the specifications, and audit the Contractor/FM Provider's inspection process.

REPORTING

934. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.7 Scaffolding Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Best practice guidelines for working at height in New Zealand, Ministry of Business, Innovation and Employment, July 2019
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
Health and Safety in Employment Regulations 1995
Scaffolding in New Zealand – Good Practice Guidelines, WorkSafe New Zealand, November 2016
Scaffolds, SiteSafe
Temporary Work Platforms, WorkSafe New Zealand, September 2015

17.8 Mobile Plant Operations

POLICY

935. Mobile plant on busy worksites constitutes a significant risk to workers as restricted sightlines, obstacles, and frequent worker movements can make mobile plant activity hazardous. The Contractor/FM Provider is responsible for managing mobile plant movements, and must apply operational and traffic control measures that minimise the risks to operators and other workers.

SPECIFICATIONS

936. The Contractor/FM Provider must ensure the application of appropriate control measures for mobile plant movements, such as:

    a. Ensuring the worksite's Traffic Management Plan minimises the movement of traffic on the worksite;
    b. Isolating vehicles and plant from workers through planning/scheduling work or barriers and exclusion zones;
    c. Minimising plant movement by locating delivery and loading activities in specific locations such as storage areas;
    d. Applying speed limits;
    e. Using spotters for reversing vehicles weighing more than one tonne, and using audible reversing alarms; flashing lights and reversing cameras;
    f. Placing warning signs at worksite entrances and exits; and
    g. Training workers and visitors on the traffic control measures operating on the site.

937. The Contractor/FM Provider must ensure self-propelled mobile plant, crane and any other equipment:

    a. Is properly registered with the appropriate NZ regulatory authority;
    b. Is properly maintained and in good working order;
    c. Has tested and tagged lifting points and lifting equipment;
    d. Have all safety guards in place;
    e. Have safe operating charts and tables readily available to operators;
    f. Have working external emergency shutoff buttons;
    g. Is correctly parked and stored (e.g. blades lowered to the ground);
    h. Has the correct roll over protection in place for type of work installed; and
    i. Enclosed cabins have air quality devices capable of managing hazardous contaminants.

AUDIT/INSPECTION

938. The Contractor/FM Provider must regularly inspect mobile plant operations to determine compliance with the specifications.

939. DEI will regularly spot-inspect the worksite for compliance with the specifications, e.g. safety equipment in self-propelled mobile plant, crane and any other equipment and audit the Contractor/FM Providers and inspection process.

REPORTING

940. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.8 Mobile Plant & Equipment Inspection checklist

REFERENCES

Fact Sheet - Keeping safe around moving plant, WorkSafe New Zealand, February 2014
Electricity Engineers' Association (EEA) *Guide for Non-Electricity Industry Employees Using Mobile Plant near Power Lines and Electricity Cables*
New Zealand Electrical Code of Practice for Electrical Safe Distances (ECP34), Section 9

Approved Code of Practice for Operator Protective Structures on Self-Propelled Mobile Mechanical Plant, Occupational Safety and Health Services, Department of Labour, February 1999
Using quick hitches safely, WorkSafe New Zealand, February 2014
Maintaining air quality in enclosed cabins – for workers, WorkSafe New Zealand, March 2021
Maintaining air quality in enclosed cabins – for PCBUs, WorkSafe New Zealand, March 2021

17.9 Mobile Plant Driver/Operator Licensing

POLICY

941. The Contractor/FM Provider is responsible for ensuring that self-propelled mobile plant, crane and any other equipment drivers and operators operating on the worksite hold a New Zealand current driver/operator licence for the vehicles, mobile plant, cranes and any other mobile or heavy construction equipment used in the course of their work.

SPECIFICATIONS

942. The Contractor/FM Provider must ensure drivers and operators of self-propelled mobile plant, crane and any other equipment:

    a. Have the necessary training and licenses for the terrain and other conditions on the worksite;
    b. Drive and/or operate in accordance with their legal use requirements;
    c. Wear correctly fitted and adjusted seat belts where required, do not carry passengers in the rear of flatbed vehicles, and do not using mobile phones or other hand held devices while driving or operating their mobile or heavy construction equipment;
    d. Adhere to NZ fatigue management laws applicable to those classes of vehicles and operator controlled mobile or heavy construction equipment;
    e. Complete pre-start inspections and checklists at the beginning of each shift; and
    f. Produce up-to-date logbooks (printed and verifiable copy) when requested.

943. The Contractor/FM Provider must maintain a Training and Competency Register using the template below for each driver and operator, and make it available to DEI on request.

AUDIT/INSPECTION

944. The Contractor/FM Provider must regularly inspect mobile plant driver and operator licenses to ensure compliance with legislation and the specifications.

945. DEI will regularly review the Mobile Plant Driver/Operator Training and Competency Register and operator logbooks and audit the Contractor/FM Provider's inspection process.

REPORTING

946. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

Training and Competency Register
17.8 Mobile Plant & Equipment Inspection checklist
4.9 Training and Competency Inspection Checklist

REFERENCES

Forklifts, bulldozers, trams,& other special vehicles, Waka Kotahi/NZ Transport Agency

17.10 High-Pressure Hydraulic Systems & Pneumatic Tools

POLICY

947. The Contractor/FM Provider must ensure that the use of high-pressure hydraulic systems and pneumatic tools on the worksite occurs in a healthy and safe manner.

SPECIFICATIONS

High-Pressure Hydraulic Systems

948. The Contractor/FM Provider must ensure that workers using high-pressure hydraulic systems:

    a. Have the training necessary to use them safely, e.g. awareness training to guard against pinprick injuries so that operators use the proper tools when responding to or looking for leaks; and
    b. Wear appropriate personal protection equipment, e.g. double eye protection i.e. safety glasses/goggles and face shield, protective clothing and boots and hearing protection.

949. The Contractor/FM Provider must ensure that workers using high-pressure hydraulic systems:

    a. Have their systems properly maintained by specialist personnel; and

    Ensure their systems are fit-for-purpose, such as:

    (1) Hoses are sheathed to protect from abrasions;
    (2) Hose chockers or whip checks certified for high pressure hydraulics are used for coupling joints;
    (3) All equipment is inspected before use;
    (4) Damaged equipment is replaced immediately; and
    (5) The right attachments for the job are used.

950. The Contractor/FM Provider must use whip check safety cables on high-pressure hydraulic hoses where appropriate.

Pneumatic Tools

951. The Contractor/FM Provider must ensure that workers using pneumatic tools:

    a. Are trained in their use;
    b. Wear appropriate personal protection equipment, e.g. safety glasses, goggles, face shields, protective clothing and boots, and hearing protection;
    c. Set up warning signs, screens and shields around areas the tools are in use;
    d. Ensure the tools are properly maintained and fit-for-purpose, e.g. air hoses are inspected regularly, the right attachments for the job are being used, such as whip arrestors and safety clips;
    e. Ensure airless spray guns are fitted with visual safety devices that prevent activation until manually released;
    f. Workers release tool pressure before releasing hose connections;
    g. Use appropriate support equipment, e.g. counter-balances and bungee cords; and
    h. When in use, the equipment does not create a hazard, e.g. passage ways kept clear of trailing hoses.

AUDIT/INSPECTION

952. The Contractor/FM Provider must regularly inspect high-pressure hydraulic systems and pneumatic tools to ensure compliance with the specifications.

953. DEI will regularly spot-inspect the high-pressure hydraulic systems and pneumatic tools and audit the Contractor/FM Provider's inspection process.

REPORTING

954. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.10 High Pressure Systems Inspection Checklist

REFERENCES

Power Hand Tools – Pneumatic Tools- Basic Safety, Canadian Centre for Occupational Health and Safety, August 2019
Safe Use of Machinery, WorkSafe, May 2014
Working with High Pressure Hydraulic Hoses, MinEx, May 2018
ISO 11148-7:2012 Hand held non-electric power tools – safety requirements – Part 7: Grinders
ISO 11148-13:2017 Hand held non-electric power tools – safety requirements – Part 13: Fastener driving tools
ISO 11148-2:2011 Hand held non-electric power tools – safety requirements – Part 2: Cutting-off and crimping tools
ISO 11148-10:2017 Hand held non-electric power tools – safety requirements – Part 10: Compression power tools
ISO 11148-3:2012 Hand held non-electric power tools – safety requirements – Part 3: Drills and tappers

17.11 Electrical Tools and Equipment & Safe Use

POLICY

955. The Contractor/FM Provider is responsible for ensuring non-portable and portable electrical tools and equipment in use on the worksite is fit-for-purpose and safe to use.

956. The Contractor/FM Provider is responsible for ensuring that workers use electrical tools and equipment in a safe manner and in a safe working environment.

SPECIFICATIONS

Non-Portable Electrical Tools and Equipment

957. The Contractor/FM Provider must ensure workers ensure that non-portable electrical tools and equipment used on DEI worksites are:

    a. Fit-for-purpose and safe;
    b. Maintained by competent and trained maintenance technicians;
    c. Bearing a recognised Regulatory Compliance Mark;
    d. Not Class 0 and I appliances;
    e. Checked for damage before use;
    f. Operated by workers trained and experienced in their use; and
    g. Regularly tested and have current tags.

958. The Contractor/FM Provider must ensure that each non-portable electrical tool and item of electrical equipment has a maintenance plan/record. Factors required for maintenance plans for electric tools and equipment are:

    a. Type of tool and power source;
    b. Manufacturer instructions and recommendations;
    c. Age and condition of the tool;
    d. Frequency of use and the tool's work cycle;
    e. Working environment; and
    f. Modifications and previous repairs to the tool.

Grinding Equipment

959. Contractors/FM Providers are responsible for ensuring that workers using grinding equipment that comply with manufacturer and relevant safety instructions. They are also responsible for ensuring electric tools and equipment are maintained and checked/serviced regularly.

960. The Contractor/FM Provider must ensure that workers:

    a. Wear appropriate PPE, including double eye protection when cutting and grinding;
    b. Regularly inspect grinding wheels for damage, including testing them to ensure they are free from cracks or defects, that the wheels fit freely on the spindles, and that safety guards are in place on those tools; and
    c. Ensure the correct disks are being used (i.e. grinding disk for grinding and cutting disk for cutting).

Portable/Hand-Held Electrical Tools and Equipment

961. The Contractor/FM Provider must ensure that portable electrical tools and equipment used on DEI worksites are:

    a. Fit for purpose and safe;
    b. Maintained by competent and trained maintenance technicians;
    c. Bearing a recognised Regulatory Compliance Mark;
    d. Not Class 0 and I appliances;

e. Checked for damage before use;
f. Operated by workers trained and experienced in their use; and
g. Regularly tested and have current tags.

Safe Use of Electrical Tools and Equipment

962. The Contractor/FM Provider must ensure that workers use electrical tools safely in a safe working environment by ensuring:

a. Working areas around where electrical tools and equipment are in use are kept dry and clean and well-lit;
b. Power leads and cords do not create a tripping or slipping hazard; and
c. Workers disconnect electrical tools when they not in use or when they are changing attachments.

AUDIT/INSPECTION

963. The Contractor/FM Provider must regularly inspect electrical equipment to ensure compliance with the specifications.

964. DEI will regularly spot-inspect the electrical equipment and audit the Contractor/FM Provider's inspection process.

REPORTING

965. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.11 Power Tools & Equipment Inspection Checklist

REFERENCES

Checking your electrical equipment is safe, WorkSafe, March 2018
Fixed and hand-held grinders, WorkSafe New Zealand, April 2014
RCDs, PSOAs, leads, cords, plugs and battery-operated equipment, WorkSafe New Zealand, March 2018
Noise Abatement for Circular Saws, Occupational Health & Safety Service & Department of Labour, 1989
AS/NZS 3760: 2020 In-service safety inspection and testing of electrical equipment and RCDs

17.12 Powder-Actuated Hand-Held Fastening Tools

POLICY

966. The Contractor/FM Provider is responsible for ensuring that the use of powder-actuated tools in the workplace are safe.

SPECIFICATIONS

967. The Contractor/FM Provider must ensure:

a. Only holders of a certificate of competence to operate powder-actuated tools do so on the worksite and do so in accordance with the manufacturer's instructions and the relevant standards;

b. Workers comply with instructions for the use and maintenance of the tools accompany them, along with instructions on the fasteners and charges recommended for the tools;

c. The tools and any attachments, equipment, and other materials are accompanied by an appropriate lockable equipment container suitable for their safe storage and maintenance;

d. The tools comply with the relevant standard/s;

e. Tools are maintained and serviced appropriately;

f. All persons in the vicinity of their use wear suitable eye and hearing protection;

g. Normal safety procedures for these tools are followed during their operation, e.g. areas on the other side of materials the tools are used on are clear of people;

h. Management of hazards such as:

(1) Particles on work surfaces capable of flying off during fastening;

(2) Concealed pipes or electrical wiring; and

(3) Explosive or flammable gas, dust or vapour, or compressed atmospheres.

i. Fixing materials are suitable for the tool; and

j. Workers place warning signs around the areas the tools are operating.

AUDIT/INSPECTION

968. The Contractor/FM Provider must regularly inspect powder-actuated hand-held fastening tools to ensure compliance with the specifications.

969. DEI will regularly spot-inspect the powder-actuated hand-held fastening tools and audit the Contractor/FM Provider's inspection process.

REPORTING

970. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.12 Powder Actuated Tools Inspection Checklist

REFERENCES

Health and Safety in Employment Regulations 1995, Regulation 27 Certificates of Competence & Regulation 34 Requirements of powder-actuated tool operator
Approved Code of Practice for Powder-Actuated, Held-Held Fastening Tools, Occupational Safety and Health, May 1995
AS 1270:2002 Acoustics – Hearing protectors
AS/NZS 1337.1:2010 Personal eye protection – Part 1: Eye and face protectors for occupational applications
AS/NZS 1337.2:2012 Personal eye protection – Part 2: Mesh eye and face protection for occupational applications

17.13 Worksite Generators

POLICY

971. The Contractor/FM Provider is responsible for the safe use and safe refuelling of liquid fuelled generators operated on the worksite, and for the safe distribution of power from those generators to their end users.

972. Where generators require running 24hrs, and are adjacent to residential homes, usage must be planned in consultation with tenant or soundproof barriers used to minimise noise disruption to tenants outside normal working hours.

SPECIFICATIONS

973. The Contractor/FM Provider must ensure that:

    a. Workers operating generators have the necessary training;
    b. The operation of liquid fuelled generators comply with the manufacturer's instructions;
    c. Liquid fuelled generators are serviced in accordance with the manufacturer's instructions by licensed and/or qualified maintenance providers;
    d. Generator exhaust systems must be properly installed and have ventilation capable of providing unobstructed cooling and ventilating air, with exhaust emissions discharged away from workers.
    e. Generators are positioned in non-enclosed locations free of clutter and combustible materials; and
    f. A fuel/oil spill kit and a suitable fire extinguisher (not tetra-chloride) is kept with each generator.

AUDIT/INSPECTION

974. The Contractor/FM Provider must regularly inspect the worksite's liquid-fuelled generators to ensure compliance with the specifications.

975. DEI will regularly spot-inspect the liquid-fuelled generators and audit the Contractor/FM Provider's inspection process.

REPORTING

976. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.13 Generators Inspection checklist

REFERENCES

Generator Safety and Use, FS 117 Version 2.2 16.05.19, Mainpower, 2019
Health and Safety at Work (Hazardous Substances – Above Ground Stationary Tanks Connected to a Generator Set) Safe Work Instrument 2019
Use, Inspection and Testing of Low Voltage Portable Equipment (Guide), Electricity Engineers' Association, 2012
AS/NZS 3010:2017 Electrical installation – Generating Sets
AS/NZS 3100:2022 Approval and test specification – General requirements for electrical equipment

17.14 Lifting Equipment, Cranes & Load–Lifting Rigging, Crane-Lifted Work Platforms & Mobile Elevating Work Platforms (MEWP)

POLICY

977. The Contractor/FM Provider is responsible for the safe operation of cranes, load-lifting rigging and crane lifted platforms, and mobile elevating work platforms, on the worksite.

SPECIFICATIONS

978. The Contractor/FM Provider must ensure that worksite cranes and load-lifting rigging, or other lifting equipment, including mobile elevating work platforms, are:

    a. Operating legally in New Zealand;
    b. Maintained and kept in a safe and operable condition; and
    c. Operated and supported by operators and support workers with the necessary training to competently transport, erect or deploy them, and operate them lifting and moving shift worksite loads in a safe manner.

979. The Contractor/FM Provider must ensure the:

    a. Safety of the crane, load-lifting rigging and crane lifted platforms, and mobile elevating work platforms during transport to and from the site, set up, use, movement, maintenance, dismantling and removal from the site;
    b. Accuracy of the ground disturbance reports on the worksite's ground state; and
    c. Provision of any other relevant hazard information relating to local conditions (e.g. overhead powerlines) to the workers involved in the crane's operations.

980. The Contractor/FM Provider must ensure:

    a. DEI has issued a *Permit to Work* for the mobile elevating work platform operations before they commence;
    b. A Job Safety Analysis (JSA) is in place for lifting equipment use and must consider overhead power lines, underground services, and the potential to strike other objects/equipment, where applicable;
    c. The JSA includes a Safe Lift Plan as described in the NZ Crane Association guides;
    d. Operators of cranes, other lifting equipment, and mobile elevating work platforms maintain daily inspection and maintenance log books;
    e. Operators maintain lift logs and/or evaluations;
    f. Operator manuals and load charts for cranes, other lifting equipment, and mobile elevating work platforms are readily available to the operators;
    g. Communication methods used by crane other lifting equipment, and mobile elevating work platforms operators and riggers are clear and understood;
    h. Workers know of the precautions required for lifting activities;
    i. Workers and visitors on the worksite do not work or move under loads;
    j. Cranes, other lifting equipment, and mobile elevating work platforms are placed or operated on level surface locations with adequate ground bearing support and clear of excavations;
    k. Adequate exclusion zones around the crane counterweight & slew area;
    l. Signage identifying lift zone areas requiring only authorised personnel enter the area;
    m. All crane and other lifting equipment loads use gag lines (16mm natural fibre rope) as required;
    n. Crane and work platform outriggers are fully extended using specified timber supports;
    o. External indicator lights and auditable alarms are fitted and operational;
    p. All lifting equipment used and on cranes have current quarterly inspection tags and be verified weekly by their operators;
    q. Crane operators replace crane sheaves after 10,000 hrs of service;
    r. Crane operator's cabins are sealable, air-conditioned and heated;

s. Riggers or Dogmen guide cranes, load-lifting rigging and crane lifted platforms, and mobile elevating work platforms during travel, and interface with the moving loads and personnel;
t. Load chains/ropes on chain blocks, chain pullers, etc., are not back hooked;
u. Chain Blocks are not used in the horizontal position;
v. Chains are removed or secured when travelling;
w. Operators do not lift multiple loads at one time;
x. Ensuring the ground and environmental conditions, including softness, evenness, slope, and wind strength are appropriate to the Mobile Elevating Work Platforms (MEWP);
y. Outriggers (where applicable to the type of MEWP) and spreader plates are deployed correctly before work starts;
z. Guard rails and toe boards are properly positioned and placed for MEWPs;
aa. MEWP harness systems are used where available;
bb. MEWP's weight moving capacity is observed and not exceeded; and
cc. When operating near hazards like water bodies, overhead powerlines, physical obstacles, and mobile hazards like passing traffic, MEWP operator/s are appropriately equipped and prepared, and suitable barriers are in place, exclusion zones observed, and Safety observers in place.

INSPECTION/AUDIT

981. The Contractor/FM Provider must regularly inspect the worksite's cranes, load-lifting rigging or other lifting equipment, including mobile elevating work platforms.

982. DEI will regularly spot-inspect the worksite for compliance with the specifications and audit the Contractor/FM Provider's inspection process.

REPORTING

983. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.14 Cranes and Lifting Equipment Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Crane Safety Manual Ver 4.0, Crane Association of New Zealand (Inc), August 2019
A5-Guidelines for the Safe Use of Crane Anchored Fall protection Inertia Reels, Crane Association of New Zealand (Inc),
Approved Code of Practice for Cranes, Department of Labour, November 2009
Crane Inspectors Tool, SafeCrane New Zealand
Mobile Elevating Work Platforms, WorkSafe New Zealand, August 2014
Approved Code of Practice for Load-Lifting Rigging, MBIE, December 2012
Crane Safety for Construction Site Managers/Supervisors – Fact Sheet – WorkSafe New Zealand, October 2014

17.15 High Pressure Gas and Liquids Transmission Pipelines

POLICY

984. The Contractor/FM Provider must ensure work undertaken on high-pressure gas or liquids transmission pipelines occurs in a safe manner.

985. The Contractor/FM Provider must ensure properly calibrated gas monitors are used to continually monitor for unsafe gas levels, for all work on or in the vicinity of these services.

SPECIFICATIONS

986. The Contractor/FM Provider must ensure that:

a. the DOC, authorised DEI official, or FMPI has issued a Permit to Work for work involving Installing connections or repairs on 'Live' gas lines and equipment (Hot Tapping) for either pipeline or storage tank work before it commences;

b. The work is notified to WorkSafe New Zealand;

c. Unless the Permit to Work stipulates otherwise, contractors must follow standard industry practice in New Zealand in their pipelines work; such as:

(1) Stockpiling Pipes:

(a) Pipe storage racks must be level and capable of supporting stockpiled pipes in a stable manner e.g. stringers between tiers and chocks or skid stakes at each skid line;

(b) Workers must not roll pipes into the stockpile;

(c) Short lengths must be stockpiled on the top rung only;

(d) Only workers directly involved in pipe handling should enter the pipe storage site;

(e) Support skids should be level before placing pipes in storage.

(2) Unloading Pipes:

(a) Guidelines must be long enough to enable workers hooking pipe sections to stand clear while guiding the pipe;

(b) Workers must inspect and repair as required, slings, hooks cables and guidelines daily;

(c) Only certified pipe hooks may be used.

(3) Stringing Pipes

(a) Transported pipes must be properly secured;

(b) Workers must secure loads of skids before transport.

(4) Pipe Bending

(a) The exclusion zone for pipe bending machines is 20 metres and workers not working in pipe bending must remain outside this zone;

(b) Workers bending pipes must steer them from the rear (the opposite end of the direction the pipe is moving);

(c) Workers must maintain situational awareness; and

(d) Use low gear when spudding the pipe into the bender.

(5) Weld Inspection

(a) Radiographic workers wear appropriate PPE e.g. dosimeters and survey meters;

(b) Radiographic systems are used by qualified operators and checked before use; and

(c) Radiographic inspection work areas are marked with warning signs and flashing lights.

(6) Lowering In

(a) Pipe sections tied off and anchored at end prior to lowering them to prevent pipe jumping skid or into ditch;

(b) Slings and cradles inspected daily for damage and replaced as required;

(c) PPE worn when working with Isocyanates;

(d) Workers must evacuate the trench when pipe sections are lowered.

(7) Tie-Ins

(a) A Permit to Work for confined space work is received before work commences;

(b) The pipe is blocked in place and the trench shored and sloped;

(c) The workspace is ventilated, there is adequate access and egress, and adequate working space.

(8) Testing

(a) Must be undertaken in accordance with the regulations and relevant standards;

(b) During pig runs, workers must keep well clear of the pipe ends;

(c) The pipeline must be depressurised before removing the pig catchers or test fittings; and

(d) Before the pipeline may be used a qualified and WorkSafe New Zealand recognised inspection body must inspect the pipeline work for compliance with the requisite regulatory requirements and relevant standards.

INSPECTION/AUDIT

987. The Contractor/FM Provider must regularly inspect the high-pressure gas or liquids transmission pipelines work over the course of the project.

988. DEI will regularly spot-inspect the worksite for compliance with the specifications and audit the Contractor/FM Provider's inspection process.

REPORTING

989. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.15 High Pressure Transmission Pipelines Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCE

Guidelines for a Certificate of Fitness for High-Pressure Gas and Liquids Transmission Pipelines, Occupational Safety & Health, Department of Labour, February 2002
Health and Safety in Employment (Pipelines) Regulations 1999
NZS 5223.1: 1985 Code of practice for high pressure gas and petroleum liquids pipelines – High pressure gas pipelines
NZS 5223.1:1985 - *Code of practice for high-pressure gas and petroleum liquids pipelines – High-pressure gas pipelines*
NZS 5223.2 – *Code of practice for high-pressure gas and petroleum liquids pipelines – Petroleum liquids transportation pipelines*
NZS 5223.2:1987 Code of practice for high pressure gas and petroleum liquids pipelines – Petroleum liquids transportation pipelines
NZS/AS 2885.1:2018 Pipelines – Gas and liquid petroleum – Part 1: Design and construction
NZS/AS 2885.2:2016+A1 Pipelines – Gas and liquid petroleum – Part 2: Welding
NZS/AS 2885.3:1997 Pipelines – Gas and liquid petroleum – Part 3: Operation and maintenance
NZS/AS 2885.4:2016 Pipelines – Gas and liquid petroleum – Part 4: Submarine pipeline systems
NZS/AS 2885.5:2012 Pipelines – Gas and liquid petroleum – Part 5: Field pressure testing
NZS/AS 2885.6:2018 Pipelines – Gas and liquid petroleum – Part 6: Pipeline safety management

17.16 Industrial Lift Trucks - Forklifts

POLICY

990. The Contractor/FM Provider must ensure that Industrial lift trucks (forklifts) operate on the worksite safely.

SPECIFICATIONS

Worksite

991. The Contractor/FM Provider must ensure:

a. A traffic management plan for forklift operations on the worksite exists, and forklift operators are trained in it;
b. Pedestrians are separated from forklift routes so far as is practicable by barriers and exclusions zones;
c. Forklift routes are suitable, i.e. flat and even for the safe operation of forklifts and are clear of obstructions;
d. The worksite induction includes forklift traffic safety;
e. Worksite proficiency training for forklift operators; and
f. Operators stop when pedestrians enter a pedestrian exclusion zone.

Forklift Operators

992. The Contractor/FM Provider must ensure:

a. Forklift operators are trained and fit for duty;
b. Forklift operators have a F endorsement on their Driver Licence;
c. Forklift operators checked their vehicles daily for defects before operations and keep and complete a daily start inspection checklist; and
d. Operators wear seatbelts and high-visibility outer-clothing.

Forklift Operations

993. The Contractor/FM Provider must ensure:

a. Forklifts are fit-for-purpose on the worksite and are regularly serviced;
b. Where fitted, flashing lights and beepers work and are used;
c. Forklifts work with set speed limits around the worksite;
d. Drivers of vehicles being loaded or unloaded by a forklift remain in their vehicles, or within sight of the operator;
e. Vehicle loading and unloading occurs in set locations;
f. Forklifts operate within their load limits (the load plate must be usable at all times and be intact);
g. Forklifts powered by internal combustion engines are not be operated in enclosed spaces;
h. Forklifts have:
    (1) Three points of contact while mounting or dismounting;
    (2) Steps that provide good footing;
    (3) Anti-slip surfaces; and
    (4) Grab handles.
    (5) Passengers are not carried; and
    (6) Forklifts are not loaded on gradients.

INSPECTION/AUDIT

994. The Contractor/FM Provider must regularly inspect worksite forklifts.

995. DEI will regularly spot-inspect worksite forklifts for compliance with the specifications and audit the Contractor/FM Provider's inspection process.

REPORTING

996. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.16 Forklift Inspection Checklist

REFERENCES

Approved Code of Practice for Training Operators and Instructors of Powered Industrial Lift Trucks (Forklifts), Occupational Safety and Health Service, Department of Labour, August 1995

17.17 Supply, Installation, Maintenance and Removal of Gas Installations and Appliances

POLICY

997. The Contractor/FM Provider is responsible for the safe installation, maintenance and removal of gas systems and/or appliances, depending on the task involving those systems and/or appliances.

SPECIFICATIONS

998. The Contractor/FM Provider must ensure the safety of works involving the installation, maintenance and/or removal (e.g. replacing gas water heaters but leaving the existing gas reticulation system in place) of gas systems and/or appliances:

    a. Have had a Permit to Work issued, as required, for them before the works commence;
    b. Are certified in accordance with and comply with Schedule 2 of the Gas (Safety & Measurement) Regulations 2010;
    c. Comply with the technical requirements of AS/NZS 5601.1:2013 Gas installations;
    d. Comply with the technical requirements of *NZS 5266:2014 Safety of gas appliances* (for new, second-hand or appliances falling outside the Supplier Declaration of Compliance regime) i.e.:
        (1) Freedom from mechanical hazards;
        (2) Adequate means of support and the ability to be stable or remain safe when subjected to external forces;
        (3) Any gas leakage shall not give rise to a hazardous situation;
        (4) Parts shall not reach temperatures which create a hazard;
        (5) Remain safe under New Zealand climatic conditions;
        (6) Operates safely at all specified gas supply pressures;
        (7) Not cause a dangerous situation to develop when subjected to an overpressure;
        (8) Be electrically safe (where appropriate);
        (9) Products of combustion are of a composition and discharged in a manner to not present a health or fire hazard;
        (10) Burners to have reliable and complete ignitions, re-ignition and cross-lighting; and
        (11) No flame abnormality e.g. flame lift, light back, yellow tipping or sooting.
        (12) Have a Supplier Declaration of Compliance lodged on the Energy Safety website; and are
        (13) Fit for purpose.

999. The Contractor/FM Provider must ensure that workers involved in the installation, maintenance or removal of gas systems and appliances have:

    a. The necessary registrations and practicing licenses to do gas fitting or assist in doing gas fitting within the limits prescribed in regulations under a current practicing licence, provisional licence or employer licence pursuant to the *Plumbers, Gasfitters and Drainlayers Act 2006*;
    b. Ensured the system components or appliances carry any compliance label required, or a supplier declaration of compliance on the database of gas supplier declarations, or an Approved Practitioner endorsement that an appliance is compliant; and
    c. Ensured, so far as is reasonably practical, that the gas appliance or fittings are safe.

INSPECTION/AUDIT

1000. The Contractor/FM Provider must regularly inspect works involving the installation, maintenance and removal of gas systems and/or appliances.

1001. DEI will regularly spot-inspect works involving the installation, maintenance and removal of gas systems and/or appliances for compliance with the specifications and audit the Contractor/FM Provider's inspection process.

REPORTING

1002. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

16.2 Isolation Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCE

Plumbers, Gasfitters and Drainlayers Act 2006
Gas (Safety and Measurement) Regulations 2010
Gas Act 1992

17.18 Boilers & Other Pressure Equipment

POLICY

1003. The Contractor/FM Provider is responsible for the safe installation, maintenance and removal of boilers and other pressure equipment, depending on the task involving those systems and/or associated equipment and systems.

SPECIFICATIONS

1004. The Contractor/FM Provider must ensure, so far as is reasonably practical, before supplying equipment to NZDF, that boilers and other pressure equipment manufactured in New Zealand comply with Regulation 19 of the *Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999*, or if imported have been designed, design verified, manufactured, and inspected to standards that are equivalent to those imposed in relation to equivalent equipment to Regulations 18 and 19 of the *Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999.*

Boilers

1005. The Contractor/FM Provider must ensure that works involving the installation, maintenance and/or removal of boilers and associated equipment:

a. Have had a Permit to Work issued, as required for them before the works commence;

b. Are carried out in accordance with the relevant regulations and standards e.g. new boilers must undergo a conformity assessment procedure pursuant to the *Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999;*

c. Are complete and a current certificate of inspection is issued by a competent and recognised inspection authority before commencing operation;

d. Include the provision of all data necessary to ensure the safe operation and other activities involving the boiler, including all documentation necessary to establish it has been designed, design verified, manufactured and inspected in accordance with the approved code of practice, drawings, manuals, name of the manufacturer, manufacturing date and inspection body, unique identifier, relevant safe operating parameters such as safe working pressure, maximum and minimum design temperatures, and any other relevant data;

e. Include full records, documents, and drawings are kept of any alterations and additions to the boiler's structure, control system and associated equipment; and

f. Include full records of all maintenance and repairs for the boiler and associated equipment, with the person responsible for the maintenance identifying themselves on the record.

1006. For the maintenance of boiler control systems the Contractor/FM Provider must hold certification to AS/NZS ISO 9001:2016.

Other Pressure Equipment

1007. The Contractor/FM Provider must ensure that works involving the installation, maintenance and/or removal of other pressure equipment:

a. Have had a *Permit to Work* issued, as required for them before the works commence;

b. Are carried out in accordance with the relevant regulations and standards;

c. Are complete and a current certificate of inspection is issued by a competent and recognised inspection authority before the equipment is operated;

d. Include the provision of all data necessary to ensure the safe operation and other activities involving the pressure equipment, including all documentation necessary to establish the equipment has been designed, design verified, manufactured and inspected in accordance with the approved code of practice drawings, manuals, name of the manufacturer, manufacturing date and inspection body, unique identifier, relevant safe operating parameters such as safe working pressure, maximum and minimum design temperatures, and any other relevant data;

e. Include full records, documents, and drawings are kept of any alterations and additions to the pressure equipment's structure, control system and associated equipment; and

f. Include full records of all maintenance and repairs for the pressure equipment and associated equipment, with the person responsible for the maintenance identifying themselves on the record.

INSPECTION/AUDIT

1008. The Contractor/FM Provider must inspect works on boilers and other pressure equipment and associated records, documents and drawings to ensure compliance with the regulations, relevant standards and the manufacturer's instructions.

1009. DEI will regularly spot-inspect works and records involving the installation, maintenance and removal of boilers and other pressure equipment for compliance with the specifications and audit the Contractor/FM Provider's inspection process.

REPORTING

1010. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATES

17.18 Boiler and Pressure Equipment Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

A general guide to the health and safety in employment (pressure equipment, cranes, and passenger ropeways) regulations 1999, Department of Labour, April 2007
Approved Code of Practice for Pressure Equipment (Excluding Boilers), Occupational Safety & Health Service, Department of Labour, June 2001
Approved Code of Practice for the Design, Safe Operation, Maintenance and Servicing of Boilers, Occupational Safety & Health Service, Department of Labour, March 1996 (revised 2000 & 2004)
Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999

17.19 Welding

POLICY

1011. The Contractor/FM Provider is responsible that works involving welding occur in a safe manner.

SPECIFICATIONS

Welding and Worker Safety

1012. The Contractor/FM Provider must ensure that:

a. A *Permit to Work* has been issued before commencement of the work;
b. Workers are provided with the appropriate safety equipment and PPE for the welding task, including respiratory protective equipment to prevent the inhalation of toxic fumes, very fine particles, gases, and non-ionising ultraviolet radiation;
c. The welding location is properly ventilated with local exhaust ventilation or portable high flow fume extractors where possible or using dedicated or manufacturer recommended ventilation systems for the welding process;
d. Workers working in hot locations on the worksite are monitored, and rotated regularly;
e. Worker toxic fume exposure monitoring occurs regularly;
f. Confined and enclosed spaces are gas tested prior to hot works;
g. Welding commences within 30 minutes of gas testing, where applicable;
h. Dedicated safety observers are in place;
i. Appropriately rated fire extinguishers or firefighting equipment are in located in close proximity to the welding area;
j. The area around and below welding activities must be correctly protected (and drains or vents within 15m sealed).
k. There is no combustible materials within 10M of the welding work;
l. Dust from grinding activities is managed;
m. Welding earth is positioned in close proximity to the work;
n. Welding/spark/flash screens and fire blankets are in place;
o. Portable eyewash equipment is available at the welding location;
p. Welding gas cylinders are secured;
q. Gas bottle gauges are working;
r. Flashback arresters are fitted to both ends of hoses;
s. Welding leads are to earth leads with a maximum of 5 metres separation;
t. Workers have secured the welding location to prevent unauthorised access; and
u. Firewatchers inspect the site no sooner than 60 minutes after welding has finished.

Welding and Grinding Equipment

1013. The Contractor/FM Provider must ensure that:

a. Welding equipment is:
    (1) Used and maintained in accordance with manufacturer instructions; and
    (2) Regularly inspected.
    (3) Grinding equipment is:
        (a) Used and maintained in accordance with manufacturer instructions; and
        (b) Regularly inspected.

Welding Worker Competence

1014. The Contractor/FM Provider must ensure that workers engaged in welding:

a. Have the necessary training and competence to perform the welding task;
b. Inspect welding leads and oxy hoses prior to use;
c. Ensured all leads and hoses are routed in a safe manner and inspected prior to use;
d. Wear appropriate flame retardant PPE for the task e.g. welding gloves, eye and hearing protection, screens attached to a helmet, welding gloves, respiratory protective equipment, etc. (Min. 8.5 cal/cm^2);
e. Have respiratory protective equipment that fits, and that workers have successfully performed positive and negative pressure fit tests before each use, and are clean shaven to achieve a proper seal, or are using powered air purifying respirators;
f. Have visually checked respiratory protective equipment for cleanliness and condition before use;
g. Use double eye protection when welding, cutting and grinding;
h. Place welding rod stubs in appropriate containers;
i. Fully encapsulate sparks and hot metal particles; and
j. Avoid working in confined spaces or poorly ventilated areas.

Exposure and Health Monitoring

1015. The Contractor/FM Provider must ensure that workers engaging in welding operations on the worksite are regularly checked as part of an exposure and health monitoring programme.

Inspection/Audit

1016. The Contractor/FM Provider must regularly inspect welding activity to ensure compliance with the regulations, relevant standards, manufacturer's instructions and the specifications.

1017. DEI will regularly spot-inspect welding activity for compliance with the specifications and audit the Contractor/FM Provider's inspection process.

Reporting

1018. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

Templates

17.19 Welding Inspection Checklist
Permit to Work Form

Processes and Procedures

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

References

Health and safety in welding – Guidance for PCBUs, WorkSafe New Zealand, July 2021
Welding and local exhaust ventilation, WorkSafe New Zealand, January 2020
Exposure monitoring and health monitoring, WorkSafe New Zealand, November 2022
NZS 4781:1973 Code of practice for safety in welding and cutting

17.20 Lasers

POLICY

1019. The Contractor/FM Provider is responsible for the safe use of lasers on the worksite.

SPECIFICATIONS

1020. The Contractor/FM Provider must ensure that laser devices or tools classification is on their warning labels and that the devices bear relevant safe use instructions.

1021. The Contractor/FM Provider must ensure that workers take appropriate safety precautions in their use and maintenance, including relevant safety protocols to the device such as:

a. Wearing appropriate eye protection which is rated for the type of laser in use;
b. Barriers or shields are in place to protect other personnel from the effects of the laser;
c. Door safety lamps are fitted (and working) in laser rooms/labs, that indicate when the laser is in use; and
d. Military operations in the vicinity of the worksite are not affected by the lasers.

1022. The Contractor/FM Provider must also ensure workers in the vicinity of the area the laser is in operation are protected by appropriate methods, such as:

a. Eye and hand protection;
b. Non-reflective barriers or warning signs;
c. Brightly lit work area;
d. Storing flammable material in containers that shield them from the laser beam;
e. Have audible warnings that laser equipment is operating; and
f. Removal of reflective surfaces.

1023. The Contractor/FM Provider must provide (within the confines of the *Privacy Act 1993*) a medical surveillance programme for workers working with or around laser equipment. The programme must consist of:

a. Pre-placement medical examination;
b. Follow up annual exams;
c. End of employment medical exams;
d. Ophthalmologic and dermatologic tests; and a
e. Review of the worker's medical history.

1024. The table below lists the types of lasers typically found on a worksite. Lasers classification relates to the intensity and wavelength of the beam.

Laser Class	Hazard Conditions	Safety Response
1	Safe under reasonable conditions of operation including the use of optical instruments for intra-beam viewing	Blink and aversion
1M	Safe under reasonable foreseeable conditions of operation but may be hazardous if the use employs optics within the beam	Blink and aversion – do not view directly with optical instruments.
2		Blink and aversion - do not stare into the beam
2M	Safe under reasonable foreseeable conditions of operation but may be hazardous if the use employs optics within the beam	Eye protection recommended – do not stare into beam or view directly using optical instruments

3R	Intra-beam viewing is potentially hazardous	Eye protection required - avoid direct eye exposure
3B (restricted)	Normally hazardous when direct intra-beam exposure occurs	Eye protection required – should not be used in dimly lit building or construction applications (that is less than approximately 100 lux). Avoid exposure to beam.

INSPECTION/AUDIT

1025. The Contractor/FM Provider must regularly inspect laser operations on the worksite to ensure compliance with the specifications and the standards.

1026. DEI will regularly spot-inspect the worksite for compliance with the specifications and audit the Contractor/FM Provider's inspection processes.

REPORTING

1027. The Contractor/FM Provider must make available the results of inspections upon DEI request.

TEMPLATES

17.20 Laser Inspection checklist

REFERENCE

Laser classifications and potential hazards, Information Sheet, Safe Work Australia, May 2012
AS 2397:1993 – Safe use of lasers in the building and construction industry
AS/NZS 2211.12:2006 – Laser Safety = Safety of free space optical communication systems used for transmission of information
AS/NZS 2211.9:2002 – Laser safety – Compilation of maximum permissible exposure to incoherent optical radiation
AS/NZS 1337.4:2011 Eye and face protection – Part 4: Filters and eye protectors against laser radiation
AS/NZS 1337.5:2011 Eye and face protection – Part 5: Eye protectors for adjustment work on lasers and laser systems (laser adjustment eye-protectors)
AS/NZS IEC 60825.14:2016 Safety of laser products – Part 14: A user's guide
NZS 5821.1:1981 Laser safety
NZS 5821.2:1981 Laser safety – Plain language code of practice for the safe use of lasers in surveying, levelling and alignment

17.21 Working at Height

POLICY

1028. The Contractor must ensure persons working at height on the worksite do so safely by:

    a. Identifying all relevant hazards and associated risks before work commences; and
    b. Applying reasonable and practical steps to prevent falls and other height related accidents by requiring the use of the necessary equipment, precautions and work systems.

SPECIFICATIONS

1029. Wherever reasonably practicable, the Contractor/FM Provider must apply the hierarchy of risk controls such as:

    a. *Elimination* of risk by replacing project elements requiring hazardous working at height solutions; and/or
    b. *Minimisation* of risk through methods of *isolation* or applying *engineering controls* such as using safe working platforms, guardrail systems, edge protection, scaffolding, mobile elevated work platforms, forklift work platforms, and mobile scaffolds; and/or
    c. *Minimisation* of risk through the application of work positioning systems, travel restraint systems, safety harnesses, industrial rope access systems and soft landing systems such as safety mesh.

1030. The Contractor/FM Provider must ensure that workers required to work at height have had the necessary training in hazard mitigation measure such as safe working platforms, guardrail systems, edge protection, scaffolding, crane lift platforms, elevated work platforms and mobile scaffolds, and PPE such as safety harnesses to enable them to work at height safely.

1031. The Contractor/FM Provider must, prior to work at height commencing:

    a. Obtain a *Permit to Work* from the DOC or authorised DEI official, or FMPI ;
    b. Complete a Job Safety Analysis;
    c. The creation of a register of 'working at height' safety equipment in use on the worksite;
    d. Regular inspections of 'working at height' safety equipment by competent persons, and recording of inspection results in the register;
    e. Remediation of any issues identified by the inspections;
    f. Fitting of current inspection tags to all 'working at height' safety equipment;
    g. 'Working at height' safety equipment is appropriate for the work;
    h. Workers visually inspect the equipment, including ladders, before use;
    i. All surfaces are adequately supported (e.g. buildings, tanks, ceilings, decking).
    j. 'Working at height' safety equipment is stored correctly when not used;
    k. All surface openings must have appropriate guards or barricades;
    l. Areas below workers working at height are controlled by the way of fences or barricades and/or safety signage such as 'Danger, Workers Above'; and
    m. The preparation and implementation of a rescue plan applicable to 'working at height' activities as part of their Emergency Management Plan.

1032. The Contractor/FM Provider must ensure workers:

    a. Workers treat short-duration work at heights the same way they treat other activities at height, and apply appropriate fall prevention controls;
    b. Correctly fit full body harnesses and equipment (i.e. not loose).
    c. Maintain 100% tie off when working at heights;
    d. Secure safety helmets by chin straps;
    e. Secure all tools and equipment from falling at all times;
    f. Follow the anchor point requirements of the work procedure defined in the Job Safety Analysis;

g. Use mechanical assist devices to securely transport materials/equipment (e.g. ropes and pulleys); and

h. Carry Suspension Trauma Straps (if required by the Rescue Plan).

TRAINING

1033. All workers involved in the planning, installation, operating fall arrest systems and supervising staff must have achieved the NZQA Unit Standard 15757 or Unit Standards 25402 and 25403.

1034. All workers using a harness system must have achieved NZQA Unit Standard 23229 or equivalent.

1035. Worker qualifications must be recorded in the Training and Competency Register.

AUDIT/INSPECTION

1036. The Contractor/FM Provider must regularly inspect 'working at height' operations on the worksite to ensure compliance with the specifications and the standards.

1037. DEI will regularly spot-inspect the worksite for compliance with the specifications and audit the Contractor/FM Provider's inspection processes.

REPORTING

1038. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

1039. The Contractor/FM Provider must make the Training and Competency Register available to DEI on request.

TEMPLATE

17.21 Working at Heights Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Health and Safety in Employment Regulations, *Regulation 35*
Best Practice Guidelines for Working at Height in New Zealand, Ministry of Business, Innovation & Employment, July 2019
Edge Protection, WorkSafe New Zealand Fact Sheet 4, September 2015
Industrial Rope Access in New Zealand: Best Practice Guidelines, Department of Labour, May 2012
Planning a Safe Approach to Working at Height – Fact Sheet 1, WorkSafe New Zealand, September 2015
Preventing Falling Through When Recladding Roofs or Installing Purlins and Tile Support Systems, WorkSafe New Zealand, June 2014
Roof Inspection and Measurement, Ministry of Business, Innovation and Employment, June 2013
Safe Working with Ladders and Stepladders, Fact Sheet, WorkSafe New Zealand, May 2022
Safe Use of Safety Nets, WorkSafe New Zealand, May 2014
Safety Nets, WorkSafe New Zealand, August 2017
Selecting the Right Equipment for Working Safely at Height, Ministry of Business, Innovation, & Employment, Department of Labour March 2012
Short Duration Work at Height, WorkSafe New Zealand, June 2015
Total Restraint System, WorkSafe New Zealand, September 2015
NZS/AS 1657:1992 Fixed platforms, walkways, stairways and ladders. Design, construction and installation

17.22 Working on Roofs

POLICY

1040. The Contractor/FM Provider must ensure persons working on roofs on the worksite do so safely by:

a. Identifying all relevant hazards and associated risks prior to work commencing; and
b. Applying reasonable and practical steps to prevent falls and other height related accidents by requiring the use of the necessary equipment, precautions and work systems.

SPECIFICATIONS

1041. The Contractor/FM Provider must, prior to work on a roof commencing:

a. Obtain a Permit to Work from the DOC or authorised DEI official, or FMPI;
b. Prepare a Job Safety Analysis for each roof work task that takes into account:
   (1) Existing type of roof and structure, roof pitch, material and framing;
c. Potential hazards present, e.g. skylights, weak points in the roof, open penetrations, brittle roofing material, and integrity of roof and substructure;
d. Access to the roof, e.g. scaffolding, ladders, roof ladders, mobile scaffolding and plant etc.;
e. Local weather conditions;
f. Tasks such as demolishing load bearing or a component of the physical integrity of the structure like bracing;
g. Activities involving or likely to involve disturbing asbestos;
h. Work occurring on or near broadcasting installations or energised electrical installations or services;
i. The size/s and type/s of the roofing materials;
j. The work height above the ground;
k. The most appropriate health and safety precautions for the site and task;
l. Other hazards on the roof, e.g. unprotected edges, fragile surfaces, skylights, holes or vents, trip hazards, roof pitch; and
m. The most practical way of safely delivering, moving, installing and/or maintaining the roofing materials on the worksite.

1042. The Contractor/FM Provider must also ensure that on the worksite:

a. All surfaces are adequately supported (e.g. buildings, tanks, ceilings, decking); and
b. All surface openings have appropriate guards or barricades.

1043. The Contractor/FM Provider must ensure that workers engaged in tasks on roofs apply best practice risk control measures, wherever practicable, such as:

a. Inspecting the roof to determine its strength, and apply appropriate risk control measures such as safety mesh or strengthen suspect areas; and
b. Compliant edge protection or travel restraint or fall-arrest systems;
c. Safety mesh or barriers preventing access to unmeshed Areas such as incomplete sections or skylights and other roof penetrations;
d. Isolating adjacent areas where persons may be struck by falling items or isolating areas under roof edges; and
e. Considering environmental risks such as moisture conditions, wind speed, UV exposure and apply appropriate control measures such as non-slip protective footwear and other PPE.

INSPECTION/AUDIT

1044. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1045. DEI will regularly spot-inspect the worksite for compliance with the specifications using the Roofing Safety Inspection checklist and audit the Contractor/FM Provider's inspection processes.

REPORTING

1046. The Contractor/FM Provider must make the results of the inspections available to DEI on request.

TEMPLATE

17.21 Working at Heights Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCE

Be Safe Working on Roofs, WorkSafe New Zealand, June 2015
Best practice guidelines for working on roofs, Ministry of Business, Innovation & Employment, June 2012
Edge Protection, WorkSafe New Zealand Fact Sheet 4, September 2015*The Safe Installation of Roof Trusses*, WorkSafe New Zealand, June 2014
Working at Heights: Roof Restoration and Maintenance, WorkSafe New Zealand, November 2014

17.23 Vibration Hazard

POLICY

1047. The Contractor/FM Provider must, so far as is reasonably practicable, eliminate or mitigate the health impacts of vibrating hand and power tools, and machines generating whole body vibrations.

1048. The Contractor/FM Provider must:

a. Establish and maintain exposure and health monitoring processes which monitor worker exposure to vibrating tools and machines; and

b. Worker management processes which ensure that worker exposure to vibrating tools and machines does not exceed recommended daily exposure limits.

c. Establish and apply appropriate vibration control measures such as elimination or substitution, isolation or engineering.

SPECIFICATIONS

Hand and Power Tools

1049. Where appropriate, the Contractor/FM Provider must include advice on how workers may avoid the risks associated with vibrating tools in worksite inductions.

1050. Wherever reasonably practicable, the Contractor/FM Provider must apply the hierarchy of risk controls such as:

a. *Elimination* of risk by replacing project elements requiring the use of vibrating hand and power tools with other approaches, e.g. using a vehicle-mounted pneumatic drill; and/or

b. *Minimisation of risk* through mechanical *isolation* of the vibrating source or surface to reduce exposure such as seating, cushions and matting;

c. *Minimisation* of risk through:

(1) Using tools generating lower vibration emission levels;

(2) Vibration dampening PPE such as gloves and tool wraps; and

(3) Rotating workers and reducing individual worker exposure to vibrating hand and power tools.

1051. The Contractor/FM Provider must ensure that vibration hazards are addressed in JSAs prepared for tasks involving vibrating tools, as well as Standard Operating procedures and Work Management Statements.

1052. The Contractor/FM Provider must ensure that workers using vibrating hand and power tools:

a. Have the necessary training to use the tools as safely as possible;

b. Inspect their tools before use;

c. Wear appropriate eye, hearing and body protection;

d. Take regular breaks or rotate with other workers;

e. Seek medical advice if experiencing discomfort, tingling, numbness or pain during or after the use of vibrating hand and power tools; and

f. Cease work with vibrating hand and power tools when:

g. The worker's daily exposure for hand-arm vibration limit value reaches $5m/s^2$ (8 hour average) and/or the daily exposure action for hand-arm vibration limit value reaches $0.5m/s^2$ (8 hour average); and/or

h. The worker's daily exposure for whole-body vibration reaches $1.15m/s^2$ A(8) and/or the daily exposure action for whole-body vibration reaches $0.5m/s^2$ (8 hour average).

1053. The Contractor/FM Provider must ensure that vibrating hand and power tools are:

a. Fit-for-purpose;

b. Regularly serviced; and

c. Fitted with anti-vibration dampers or shock absorbers.

Whole Body Vibration

1054. Workers operating machinery such as forklifts, tractors, mobile machinery like earth movers and rollers, or working on platforms attached to vibrating machinery experience whole body vibrations.

1055. WorkSafe recommends the maximum daily exposure to whole body vibration is 1.15m/s^2 (8 hour average) or vibration dose value of 21m/s1.75, with the expectation that control measures are put in place if workers are exposed to 'the exposure action value of 0.5m/s2 (8 hour average) or more, or a vibration dose value of 9.1m/s1.75 or more.

1056. The Contractor/FM Provider must ensure, so far as it is practicable, that workers are not exposed excessive vibrations during machine operation. This requires the Contractor/FM Provider:

a. Determining what the vibration emissions levels are, and use that to limit operator time;
b. Ensure the machine is in good working condition;
c. Ensure the operator can work comfortably, e.g. seat adjustment to operator's needs and training to avoid body positions that exacerbate the effects of whole body vibration; and
d. Ensure the operator has the training required to operate the machine safely on uneven surfaces or other conditions likely to result in whole body vibration.

AUDIT/INSPECTION PROCESS

1057. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1058. DEI will regularly spot-inspect the worksite for compliance with the specifications using the Vibration Safety Inspection checklist and audit the Contractor/FM Provider's inspection processes.

REPORTING

1059. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

10.2 Workers and Equipment Inspection Checklist

REFERENCES

Whole body vibrations – information for businesses – WorkSafe New Zealand, March 2021
Whole body vibration – information for workers – WorkSafe New Zealand, March 2021
Hand-arm vibration – Information for businesses, WorkSafe New Zealand, March 2021
Guide to Managing Risks of Exposure to Hand-arm Vibration in Workplaces, Safe Work Australia, October 2016

17.24 Manual Handling

POLICY

1060. The Contractor/FM Provider must, so far as is reasonably practicable, eliminate or mitigate the health impacts of manual handling on the worksite.

SPECIFICATIONS

1061. The Contractor/FM Provider must, so far as is reasonably practicable:

a. Identify and eliminate or mitigate hazardous manual handling practices;
b. Design tasks to reduce or eliminate the amount of manual handling required;
c. Where possible, redesign the workplace to reduce manual handling;
d. Provide relevant equipment/mechanical aids to reduce and/or eliminate manual handling injuries;
e. Identify and assess worksite hazards and apply appropriate safety controls or mitigation processes to manage those hazards, such as preventing congestion on the worksite;
f. Ensure workers have adequate rest breaks or assign sufficient workers to perform prolonged manual handling tasks to reduce worker strain;
g. Provide adequate space for the workers to perform manual handling tasks; and
h. Establish controls to identify all repetitive or sustained postures, movements or forces and provide ergonomic solutions where appropriate.

1062. The Contractor/FM Provider must ensure workers:

a. Have the necessary training to perform manual handling to reduce and/or eliminate the incidence of manual handling injuries;
b. Perform warm up activities before starting manual tasks, as required; and
c. Select the appropriate PPE and ergonomic tools and equipment for specific manual activities.

INSPECTION/AUDIT

1063. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1064. DEI will regularly spot-inspect the worksite for compliance with the specifications using the Manual Handling Safety Inspection checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

1065. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

17.24 Manual Handling Inspection Checklist.

REFERENCES

Code of Practice for Manual Handling, Occupational Safety and Health Service, Department of Labour, June 2001
Preventing manual injuries, WorkSafe New Zealand, June 2016

17.25 Radiation

POLICY

1066. The Contractor/FM Provider is responsible, so far as is reasonably practicable, for ensuring that the use of devices generating ionising and non-ionising radiation on or near the worksite does not affect the health of worksite workers, or other persons in the vicinity of the worksite.

SPECIFICATIONS

Ionising Radiation

The Worksite

1067. The Contractor/FM Provider must:

a. Obtain a Permit to Work , as required from the DOC, the authorised DEI official, or FMPI;
b. Inspect radiography work areas prior to starting;
c. Prepare a detailed industrial radiography risk assessment for each task involving radiological devices, e.g. Job Safety Analysis;
d. Prepare an emergency response plan;
e. Issue a site notification when radiation is to be used;
f. Identify every area used for the storage of radioactive substances and on barricade flagging a sign bearing the radiation-warning symbol and the word ‘radioactive’ or ‘radiation’;
g. Control and supervise exclusion zones;
h. Provide a safe means of entry and exit to the radiography work area and instruct all who enter on the necessary safeguards & procedures;
i. Install an auto actuating siren and flashing lights system that flashes and rings on exposure at the radiography site;
j. Provide adequate task lighting; and
k. Forbid the use of ladders as working platforms for radiological works.

Plant and Equipment

1068. The Contractor/FM Provider must:

a. License and regularly inspect the radiation source/s;
b. Maintain a Site Source Register, including all details of individual sources of radiation materials/equipment on the worksite. It must ensure full traceability of each source and keep records when moving gamma sources and X-ray machines;
c. Provide emergency response equipment such as retrieval tongs;
d. Ensure a dose rate meter is calibrated and is available for use; and
e. Ensure radiation workers have conducted radio checks with emergency services, prior to starting the task.

Personnel Safety

1069. The Contractor/FM Provider must:

a. Ensure workers comply with the Code of Practice for Industrial Radiography and the Code of Practice for the Safe Transport of Radioactive Material;
b. Ensure all personnel hold a current licence under the *Radiation Safety Act 2016* (with a minimum of one full license holder with an assistant or two or more full license holders at each radiography site). Radiographers must either hold a use licence pursuant to Section 21 of the *Radiation Safety Act* 2016, or act under the supervision or instructions of someone holding a use licence;
c. Provide procedures and methods to evaluate personnel exposed to radiation;
d. Appoint a licenced Radiation Safety Officer;
e. Monitor worker radiation exposure and keep the data in each worker's personnel file;

f. Require workers to wear Thermo-Luminescence Dosimeters (TLD) and personal alarm devices and ensure workers are trained in the use of the devices to reduce the likelihood of accidental exposure;
g. Provide effective radiation shielding to workers and ensure it is used properly;
h. Provide lead lined PPE at the worksite (in accordance with the contractor emergency plan); and
i. Keep workers at a minimum safe distance from the radiological device.

Non-Ionising Radiation

1070. The Contractor/FM Provider must ensure workers working in the vicinity of non-ionising radiation sources do not absorb radiofrequency radiation in excess of the limit set by NZS 2772.1:1999, i.e. the *specific absorption rate* (SAR) of 0.08 W/kg.

1071. The Contractor/FM Provider must ensure that for any work occurring in the vicinity of non-ionising radiation sources capable of exceeding this limit:

a. The *Permit to Work* issued for maintenance work sets minimum safe distances for workers from the non-ionising radiation source/s; or
b. NZDF turns off the non-ionising radiation source/s during the period of the work.

INSPECTION/AUDIT

1072. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1073. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

1074. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

17.25 Radiation Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Code of Practice for Industrial Radiography, Ministry of Health, June 2019
Code of Practice for the Safe Transport of Radioactive Material, Ministry of Health, April 2019
Radiation Safety Act 2016
Radiation Safety Regulations 2016
NZS 2772.1:1999 Radiofrequency field – Maximum exposure levels – 3 kHz to 300 GHz

17.26 Falling Objects

POLICY

1075. The Contractor/FM Provider must ensure workers or persons or, vehicles or structures near the worksite are not endangered by objects falling from or on the worksite. This may include:

    a. Scaffolding, tools, and other equipment;
    b. Building components like window panes, ceiling and wall panels; and
    c. Loads or objects being moved by a crane, forklift or mobile elevated work platform.

SPECIFICATIONS

1076. The Contractor/FM Provider must ensure the safety of workers and other persons, vehicles and structures from falling objects through measures such as:

    a. Identifying and implementing solutions that eliminate the likelihood of falling objects, e.g. off-site prefabrication of building components;
    b. Substituting higher risk activities, equipment plant, or procedures for lower risk ones e.g. Physical barriers, or such as retention screening or retention straps to stop parts of scaffolding or platforms to prevent items sliding or flying off;
    c. Defining ground-level exclusion zones below working areas with fencing or barrier tape;
    d. Requiring workers to preventing accidents through such measures as:
        (1) Using chutes when placing debris in a skip; and
        (2) Tying off welded/bolted objects when they are being or unbolted/cut to prevent them falling.
    e. The provision of:
        (1) Covered pedestrian walkways;
        (2) Catch platform with vertical sheeting or perimeter screening; and
        (3) Equipping mobile plant with overhead protection.
    f. Requiring:
        (1) Tethering all handheld tool using lanyards or wrist straps;
        (2) Tethering or otherwise securing tools and materials; and
        (3) Signage to warn of falling objects.
    g. Ensuring that workers wear suitable PPE.

INSPECTION/AUDIT

1077. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1078. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

1079. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

17.21 Working at Heights Inspection Checklist
16.7 Barriers and Signage Inspection Checklist

REFERENCES

Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, Regulation 25
General risk and workplace management, WorkSafe New Zealand, November 2022

17.27 High-Pressure Water Jetting (including Hydrovac Excavation)

POLICY

1080. The Contractor/FM Provider must ensure that:

a. Workers engaged in high-pressure water jetting do so safely, avoiding risks such as those associated with slippery conditions, confined spaces, falling objects, respiratory and eye hazards, electric shock, noise and hazardous chemicals; and

b. Must ensure that the high-pressure water jetting does not create a hazard for bystanders, e.g. skin penetration by the water jet, flying debris, and noise.

SPECIFICATIONS

1081. Contractor/FM Providers are responsible for ensuring workers and bystanders are not subject to hazards generated by a high-pressure water jetting system. That includes:

a. Obtaining a Job Safety Analysis before commencing work with a high-pressure water jetting system;

b. Obtaining a Permit to Work for high-pressure water jetting tasks involving permitable activities, e.g. confined spaces, working at heights and ground disturbance.;

c. Ensuring workers have the required training to safely undertake high-pressure water jetting work;

d. Equipment is operated within manufacturer instructions, is fit-for-purpose and inspected and maintained as appropriate;

e. Ensuring all hoses and joints are in a safe and serviceable condition;

f. Ensuring workers wear appropriately serviced and fit-for-purpose PPE, such as a foot and lower leg guard or shield, leg and body armour and protective gloves, face shield, and eye and ear protection;

g. Establishing an exclusion zone around high-pressure water jetting worksite;

h. Installing safety barriers or some other appropriate exclusion system to create a bystander safe zone;

i. Using oscillating ceramic heads to avoid damage to exposed services during excavation;

j. Ensuring hose chockers or whip checks certified for high pressure systems are used for coupling joints; and

k. Ensuring effective controls are in place to:

(1) Safely manage any waste produced; and

(2) Manage wastewater runoff from the worksite through consultation with DEI Environmental Services.

1082. The Contractor/FM Provider must use whip check safety cables on high-pressure hoses where appropriate.

INSPECTION/AUDIT

1083. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklists listed below for guidance.

1084. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

1085. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

10.2 Workers and Equipment Inspection Checklist
16.7 Barriers and Signage Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Health and Safety at Work (Asbestos) Regulations 2016, Regulation 18
Exterior Cleaning Industry Association Code of Practice, Exterior Cleaning Industry Association
High pressure water blasting should not be used to clean roofing and cladding containing asbestos, WorkSafe New Zealand, May 2022
Water Blaster Operation and Safety Manual, Pressure Solutions Ltd,
Guide for Managing Risks from High Pressure Water Jetting, Safe Work Australia, December 2013
High Pressure Washing, Safe Work Practices, Work Safe BC, October 2008
AS/NZS 2210.3:2009 Occupational protective footwear – Specification for safety footwear
AS/NZS 4233.1:2013 High pressure water-jetting systems – Part 1: Safe operation and maintenance

17.28 Abrasive Blasting

POLICY

1086. The Contractor/FM Provider must ensure that:

   a. Workers engaged in abrasive blasting work do so safely with appropriate PPE; and
   b. Bystanders are provided with effective protection from dust, flying debris and noise.

SPECIFICATIONS

1087. Contractor/FM Providers must ensure workers and bystanders are not subject to hazards generated by an abrasive blasting system. That includes:

   a. A Job Safety Analysis preceding the commencement of work with an abrasive blasting system;
   b. Obtaining a Permit to Work for abrasive blasting tasks involving permitable activities, e.g. confined spaces, and working at heights;
   c. Ensuring that abrasive blasting is not used on materials containing or suspected of containing asbestos;
   d. Where possible, using less hazardous abrasive materials and/or using wet abrasive blasting;
   e. Where possible, using portable or temporary enclosures;
   f. Ensuring workers have the required training to safely undertake abrasive blasting work;
   g. Ensuring equipment is operated within manufacturer instructions, is fit-for-purpose and inspected and maintained as appropriate;
   h. Ensuring workers wear appropriately serviced and fit-for-purpose PPE, such as respiratory protective equipment or respirator helmets with, a foot and lower leg guard or shield, leg and body armour and protective gloves, face shield, and eye and ear protection;
   i. An exclusion zone applies in the vicinity of abrasive blasting work;
   j. Ensuring safety barriers or some other appropriate exclusion system creating a bystander safe zone;
   k. Applying appropriate dust controls;
   l. Ensuring effective controls are in place to:
      (1) Recover and recycle blast material used;
      (2) Safely manage any waste produced; and
      (3) Manage any wastewater runoff from the worksite.

INSPECTION/AUDIT

1088. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklists listed below for guidance.

1089. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

1090. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

10.2 Workers and Equipment Inspection Checklist
18.3 Waste Management Inspection Checklist
167 Barriers and Signage Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Health and Safety at Work (Asbestos) Regulations 2016, Regulation 18
Abrasive Blasting – Code of Practice, Workplace Health and Safety Queensland, 2021
AS/NZS 1337.1:2010 Personal eye protection – Eye and face protectors for occupational applications
AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment
AS/NZS 1800:1998 Occupational protective helmets – Selection, care and use
AS/NZS 2161.3:2020 Occupational protective gloves – Protection against mechanical risks
AS/NZS 2210.3:2009 Occupational protective footwear – Specification for safety footwear
BS EN ISO 14877:2002 Protective clothing for abrasive blasting operations using granular abrasives
ISO 3861:2021 Rubber hoses and hose assemblies for sand and grit blasting - Specification

17.29 Confined Spaces

POLICY

1091. The Contractor/FM Provider is responsible for ensuring workers working in confined spaces do so safely.

SPECIFICATIONS

1092. The Contractor/FM Provider must ensure that:

a. A Job Safety Analysis for the task has been completed;
b. A Permit to Work has been obtained from the DOC or authorised DEI official, or FMPI before the confined space task begins;
c. Workers engaged to work in a confined space possess the following current qualifications:
   (1) NZQA Unit Standard 17599 Plan a confined space entry; and
   (2) NZQA Unit Standard 18426 Demonstrate knowledge of hazards associated with confined spaces.
d. Workers engaged to work in a confined space task with potentially hazardous atmospheric conditions possess the following qualifications:
   (1) NZQA Unit Standard 25510 Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely; and
   (2) NZQA Unit Standard 25044 Wear and operate compressed air-breathing apparatus in the workplace.
e. Confined space entry work must be supervised;
f. Task supervisors and Workers must maintain an Entry/Exit log;
g. Suitable communications are in place and worker/s understand and use them;
h. Supervisors and workers complete a pre-entry checklist;
i. Atmospheric testing is conducted by an Authorised Gas Tester in accordance with standard testing procedures;
j. Supervisors and workers identify and comply with specific PPE requirements as defined in the Job Safety Analysis;
k. A job and worksite specific rescue plan, including rescue and first aid personnel and equipment, is in place before workers enter the confined space;
l. There is a dedicated stand-by person must be in place, who has the training necessary to supervise workers working in the confined space and is familiar with the work;
m. Confined space areas have the appropriate signage in place (e.g. 'Confined Space - No Unauthorised Entry');
n. The space is clear of obstructions and conditions capable of hindering workers entering, moving around and exiting it, are, so far as is reasonably practicable removed or mitigated, e.g. opportunities for slips, trips and falls;
o. Working low voltage lighting is installed within the confined space;
p. Electrical equipment in the confined space complies with electrical regulatory requirements;
q. Ventilation systems are available and working to ensure as comfortable a working environment as possible;
r. Exhaust fumes are excluded from the confined space;
s. All service lines and systems relevant to the confined space and the task are isolated and verified as isolated (including performing related purging activities); and
t. Workers follow appropriate heat stress prevention procedures.

INSPECTION/AUDIT

1093. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1094. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

1095. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

17.29 Confined Spaces Inspection Checklist
16.7 Barriers and Signage Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Confined spaces: planning entry and working safely in a confined space, WorkSafe New Zealand, March 2020
AS 2865: 2009 Confined Spaces

17.30 Occupational Diving

POLICY

1096. The Contractor/FM Provider is responsible for ensuring workers performing occupational diving work do so safely.

SPECIFICATIONS

1097. The Contractor/FM Provider must ensure that occupational divers have:

a. Prepared a Job Safety Analysis for the underwater task and a diving plan, prior to commencing the dive;
b. Obtained a Permit to Work from the DOC or authorised DEI official, or FMPI before the occupational diving task begins;
c. Current WorkSafe certificates of competence relevant to the category of diving undertaken, and current Diving Hyperbaric Medical Service medical clearances;
d. Provided a suitable and comprehensive rescue plan for all diving activities as part of their Emergency Management Plan;
e. Positioned enough dive flags of a satisfactory size to indicate the presence of divers in the area;
f. Properly briefed spotters of their tasks, and deployed them to warn of surface and sub-surface hazards e.g. approaching vessels;
g. Provided spotters with a reliable and satisfactory method of communication to the divers;
h. Prepared and implemented fit-for-purpose and functional primary and secondary recovery methods;
i. Prepared a standby diver and provided the standby diver with proper protection from elements and ready access to water;
j. Elevated and protected from damage diving power cables and hose runs;
k. Ensured the dive area is free of obstructions, providing direct clear access for a stretcher from the diver recovery area to and into the chamber;
l. Identified emergency response and rescue requirements prior to the dive commencing (including available personnel and equipment);
m. Provided emergency contact numbers;
n. Regularly conducted diver emergency recovery drills and recorded them in a safety register;
o. Provided fit-for-purpose lighting when required;
p. Ensured all personnel are clear on emergency roles, including boating crews; and
q. Assessing the area prior to commencement of the dive and then continually monitoring the area for potentially injurious or intrusive marine fauna.

INSPECTION/AUDIT

1098. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1099. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below and audit the Contractor/FM Provider's inspection processes.

REPORTING

1100. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

17.30 Diving Activity Inspection Checklist
16.7 Barriers and Signage Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Health and Safety in Employment Regulations 1995, *Regulations 32, 47, 48 and-49*
Bounce Diving, WorkSafe New Zealand, November 2018
Reverse Profile Diving, WorkSafe New Zealand, November 2018
Diving – Working Safely in the Occupational Diving, Snorkelling, and Free-Diving Undustries – A Guide for PCBUs, WorkSafe New Zealand, April 2020
Use and maintenance of a diver's hose in occupational diving, WorkSafe New Zealand, May 2020
Diving with underwater powered tools, WorkSafe New Zealand, May 2020
Use of thermal cutting equipment in occupational diving, WorkSafe New Zealand, November 2018
AS/NZS 2299.1:2015 Occupational diving operations – Part 1: Standard operational practice
AS/NZS 2299.1:2015 Occupational diving operations – Part 1: Standard operational practice – Supplement1: AS/NZS 2299 diving medical examination forms (Supplement to AS/NZS 2299.1:2015)
AS/NZS 2815.2:2013 Training and certification of occupational divers - Part 2: Surface supplied diving to 30 metres
AS/NZS 2299.4:2005 – Occupational diving operations – Film and photographic diving
AS/NZS 2815.5:2013 Training and certification of occupational divers- Part 5: Dive supervisor
AS/NZS 2815.6:2013 Training and certification of occupational divers - Part 6: Restricted occupational SCUBA diver

17.31 Remotely Operated Underwater Vehicles

POLICY

1101. The Contractor/FM Provider must ensure that Remotely Operated Underwater Vehicles (ROV) operate in a safe manner and that the health and safety of occupational divers required for any elements of ROV operations are managed in accordance with the Underwater Workers specification above.

SPECIFICATIONS

1102. The Contractor/FM Provider must ensure that the ROV operators have:

a. A current certificate for the ADAS Remotely Operated Vehicle (ROV) qualification;
b. Maintained and regularly serviced the ROV and ensured it is fit-for-purpose for the task;
c. Provided a suitable and comprehensive rescue plan for all diving activities as part of their Emergency Management Plan;
d. Positioned enough dive flags of a satisfactory size used to indicate the presence of the ROV and any support divers in the area;
e. Properly briefed spotters of their tasks, and deployed them to warn of surface and sub-surface hazards e.g. approaching vessels;
f. Provided spotters with a reliable and satisfactory method of communication to support divers required for the ROV operations;
g. Prepared and implemented fit-for-purpose and functional primary and secondary ROV recovery methods;
h. Prepared a standby diver or divers and provided proper protection from elements and ready access to water;
i. Elevated and protected from damage the ROV's power cables and hose runs;
j. Ensured the dive area is free of obstructions, so far as is practicable, to prevent the ROV becoming fouled, requiring the intervention of support divers;
k. Identified emergency response and rescue requirements prior to the dive commencing (including available personnel and equipment);
l. Provided emergency contact numbers;
m. Regularly conducted ROV emergency recovery drills and recorded them in a safety register;
n. Provided fit-for-purpose lighting when required; and
o. Ensured all personnel are clear on emergency roles, including boating crews.

INSPECTION/AUDIT

1103. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklists listed below for guidance.

1104. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklists below.

REPORTING

1105. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

17.30 Diving Activity Inspection checklist
16.7 Barriers and Signage Inspection checklist
17.31 Remotely Operated Vehicle Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Autonomous Ship Operation in New Zealand, Maritime New Zealand, December 2023
Norsok Standard U-102, Remotely operated vehicle (ROV) services November 2020,
The ROV Manual: A User Guide for Observation Class Remotely Operated Vehicles, Christ, Robert D & Wernli Sr, Robert L, Elsevier Ltd, 2007

17.32 Helicopter Lift and Transport Work

POLICY

1106. The Contractor/FM Provider must ensure that helicopter lift and transport work on NZDF worksites occurs in a safe manner.

SPECIFICATIONS

1107. The Contractor/FM Provider must ensure that helicopter operators have:

a. Been approved for operations on a NZDF camp or base by DEI;
b. Obtained clearance for the helicopter to fly in NZDF airspace;
c. Briefed the helicopter pilot about the task, location, local environmental conditions, terrain and the worksite hazards;
d. Ensured ground personnel have the necessary training and communication systems to support the pilot and the helicopter operations;
e. Applied suitable dust control measures and ensured loose materials on the worksite and its surrounds are secured or removed and removed obstacles and people on flightpaths to and from the helipad;
f. Marked worksite obstructions which may interfere with helicopter operations;
g. Positioned the helipad and any associated fuel stores in a position where the helicopter can take off into the wind;
h. Ensured worksite workers are issued and wearing appropriate PPE during helicopter operations, such as hearing protection (Class 4) and appropriate eye protection (goggles), a hard hat with a chin strap, and high visibility garments;
i. Ensured all lift gear, rigging, and other apparatus required for the task is maintained and regularly serviced and fit-for-purpose; and
j. Prepared an Emergency Response Plan.

INSPECTION/AUDIT

1108. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications.

1109. DEI will regularly spot-inspect the worksite for compliance with the specifications.

REPORTING

1110. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

REFERENCES

Approved Code of Practice for Safety and Health in Forest Operations, Ministry of Business, Innovation and Employment, November 2014
Helicopter Performance, Civil Aviation Authority, February 2020
Inspections & Safe Use of Lifting Equipment, Civil Aviation Authority, March 2022
Winter Flying, Civil Aviation Authority, May 2023
Best Practice Guidelines for Working with Helicopters, FITEC, 2000
Civil Aviation Rules Part 133 - Helicopter External Load Operations
Civil Aviation Rules Part 91 – General Operating and Flight Rules
NZS 6807:1994 Noise management and land use planning for helicopter landing areas

17.33 Unmanned Aerial Vehicles

POLICY

1111. The Contractor/FM Provider must ensure that Unmanned Aerial Vehicle (UAV) operations on NZDF worksites occur in a safe manner and in accordance with the rules specified Civil Aviation Authority of New Zealand (CAA) rules 101 and 102.

SPECIFICATIONS

1112. The Contractor/FM Provider must ensure the UAV operators have:

a. Been approved for operations on a NZDF camp or base by DEI;
b. Ensured the UAV is regularly serviced and maintained, and currently approved for flight operations and is fit-for-purpose;
c. A current Unmanned Aircraft Operator certificate and the necessary training and experience for the task; and
d. Prepared an Emergency Response Plan as directed.

1113. The UAV operators must:

a. Comply with any flight and data gathering restrictions applicable to the camp or base;
b. Immediately land their UAVs when instructed by camp or base air traffic control; and
c. Provide a spotter to warn of aircraft entering the UAV flight area.

INSPECTION/AUDIT

1114. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications referring to the checklists listed below for guidance.

1115. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below, and audit the Contractor/FM Provider's inspection process.

REPORTING

1116. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATE

16.7 Barriers and Signage Inspection checklist
17.31 Remotely Operated Vehicle Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Civil Aviation Rules - Part 101 – Gyrogliders and Parasails, Unmanned Aircraft (including Balloons), Kites, and Rockets – Operating Rules
Civil Aviation Rules – Part 102 – Unmanned Aircraft Operation Certificate Holders
UAVNZ Code of Conduct, UAVNZ, 2022

17.34 Hot Work

POLICY

1117. The Contractor/FM Provider must ensure workers conduct hot work in a safe manner.

SPECIFICATIONS

1118. The Contractor/FM Provider must ensure that workers engaged in hot work on the worksite have:

a. Obtained a Permit to Work from the DOC or authorised DEI official, or FMPI, which must include any other notifiable or permitable activities associated with the hot work task;
b. Prepared a Job Safety Analysis for the hot work task;
c. Isolated local fire suppression and detection systems where appropriate;
d. Provided fire suppression equipment such as fire extinguishers or fire hose;
e. Prepared the worksite through control measures such as:
    (1) Flushing containers of flammable liquids and vapours;
    (2) Sweeping floors clear of combustibles;
    (3) Wetting down combustible floors and shielding them with measures like damp sand, metal or other non-combustible materials;
    (4) Removing portable combustible materials or liquids;
    (5) Protecting immovable combustible materials with non-combustible covers or barriers; and
    (6) Covering wall and floor openings.
f. Assigned a Safety Observer who observes the hot work and immediate environment and applies appropriate risk control measures as:
    (1) Detecting, containing and extinguishing all sparks and hot debris;
    (2) Removing job waste and work produced combustibles e.g. dust;
    (3) Monitoring environmental conditions;
    (4) Ensuring that no ignition sources remain immediately and again, 30 minutes after the completion of the hot work;
    (5) Using a fire extinguisher or other fire extinguishing equipment authorised for the hot work by the Permit to Work;
    (6) Checking the worksite after the completion of hot work for hot spots; and
    (7) Initiating emergency notification process and plans as required.
g. Designated exclusion zones for personnel and vehicles; and
h. Selected and are wearing PPE appropriate to the task.

AUDIT/INSPECTION

1119. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications referring to the checklists listed below for guidance.

1120. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below, and audit the Contractor/FM Provider's inspection process.

REPORTING

1121. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

16.7 Barriers and Signage Inspection checklist
17.34 Hot Work Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map

PTW-A: Permit to Work - Application Procedure

REFERENCES

Health and Safety in Welding, WorkSafe New Zealand, July 2021
Hot Work on Drums and Tanks, Occupational Safety & Health Service, Department of Labour, March 1988
Hot work fire safety, NZI Risk Solutions, April 2015
AS 1674.1:1997 Safety in welding and allied processes Part 1: Fire precautions
NZS 4781:1973 Code of practice for safety in welding and cutting

17.35 Landscaping

POLICY

1122. The Contractor/FM Provider must ensure that landscaping work is conducted safely.

SPECIFICATIONS

1123. The Contractor/FM Provider must ensure workers:

a. Wear appropriate high-visibility and protective garments and personal protection equipment, including footwear, respiratory protective equipment, hand, eye and hearing protection, heat and cold management equipment, and sun screens as required;
b. Are trained in the use of tools, equipment, plant and vehicles required for the work;
c. Inspect tools and other equipment before use;
d. Maintain and service hand tools and powered mechanical and electrical equipment in accordance with manufacturer instructions;
e. Apply manual handling safety instructions for all relevant aspects of the work;
f. Prepare a traffic management plan if required;
g. Apply electrical safe distances rules as required;
h. Apply hazardous substances rules for substances such as fertilizers, herbicides, pesticides, and volatile fuels; and
i. Where appropriate, any electrical equipment in use must be RCD protected.

AUDIT/INSPECTION

1124. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications referring to the checklists listed below for guidance.

1125. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below, and audit the Contractor/FM Provider's inspection process.

REPORTING

1126. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

16.7 Barriers and Signage Inspection Checklist
17.1 Ground Disturbance Works Inspection Checklist

REFERENCES

Health and Safety by design, WorkSafe New Zealand, August 2018
Health and Safety for Landscaping and Lawn Maintenance Companies, WorkSafe BC, December 2014
NZS 3116:2002 Concrete segmental and flagstone paving
NZS 4404:2010 Land development and subdivision infrastructure
SNZ HB 44:2001 Subdivision for people and the environment

17.36 Tree Maintenance & Felling

POLICY

1127. The Defence Estate contains a variety of trees, including ornamental trees in camps and bases and forest stands in exercise areas. Tree maintenance is an essential activity in both contexts, and DEI/FM Providers engages contractors to undertake that work.

1128. DEI requires that the Contractor/FM Provider follow standard industry processes when working with trees in exercise areas including implementing exclusion zones around the worksites to prevent endangering persons, vehicles or other NZDF assets near the tree maintenance work.

1129. For locations within camps and bases, standard tree safety measures require augmentation with worksite barriers, exclusion zones, and any other appropriate health and safety plans, activities and equipment necessary to protect other persons present in the camp and base, vehicles, buildings, and other assets.

SPECIFICATIONS

1130. The Contractor/FM Provider must:

a. Assess the hazards and risks pertinent to the task and the location such as people, structures, and other NZDF assets in the vicinity, terrain and environmental conditions, access, tree/s condition, local hazards such as overhead power lines, underground and surface services, wind loading, structural integrity and so on;
b. Identify appropriate hazard elimination or substitution processes and control measures;
c. Notify WorkSafe New Zealand of the work;
d. Prepare a Job Safety Analysis;
e. Obtain a Permit to Work from the DOC or authorised DEI official, or FMPI;
f. Implement appropriate worksite exclusion zones, drop zones, and barriers;
g. Ensure the workers have the required training, necessary experience, and appropriate supervision for the task;
h. Ensure the workers use appropriate PPE;
i. Ensure equipment, machinery and plant, such as cutting and lifting apparatus used for the task is fit for purpose, checked and tagged where required, and is fitted with protective devices or structures, where required, that are suitable for the task and/or required by legislation, regulations, or approved codes of practice, or recommended by WorkSafe guidelines;
j. Prepare a traffic management plan, if required;
k. Ensure that vehicles used for the task are appropriately licensed, registered, maintained, and operated within the scope of relevant legislation, approved codes of practice and WorkSafe guidelines;
l. Prepare a communications plan, if required;
m. Ensure an emergency plan is prepared and appropriately resourced;
n. Conduct a pre-start meeting for the task identifying known hazards and risks;
o. Supervise the work effectively, and monitor the worksite to hazards generated by the task and take appropriate actions through the course of the task to ensure that persons involved in the task, and any persons, vehicles, structures, and other facilities in the vicinity of the task are kept safe during and after the task; and
p. Clean up the site in accordance with the contractual requirements.

AUDIT/INSPECTION

1131. The Contractor/FM Provider must regularly inspect the worksite, based on the frequency set out in the *CSMP/FMSMP*.

1132. DEI will regularly spot-inspect tree felling or tree maintenance worksites, and audit the Contractor/FM Provider's inspection process.

REPORTING

1133. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

16.7 Barriers and Signage Inspection Checklist
10.2 Workers and Equipment Inspection Checklist
Permit to Work Form

PROCESSES AND PROCEDURES

PTWA-Permit to Work - Application Process Map
PTW-A: Permit to Work - Application Procedure

REFERENCES

Approved Code of Practice for Safety and Health in Forestry Operations, Ministry of Business, Innovation and Employment, December 2012
Guide to Managing Risks of Tree Trimming and Removal Work, Safe Work Australia, July 2016
Best Practice Guidelines for Tree Felling, Forest Owners Association, Competenz, May 2016
Safe Manual Tree Felling, WorkSafe New Zealand, February 2014

17.37 Loading and Unloading Vehicles

POLICY

1134. The Contractor/FM Provider must ensure that loading and unloading of vehicles on the worksite is managed and undertaken in a safe manner.

SPECIFICATIONS

General

1135. Before loading or unloading vehicles weighing more than 500 kg with loads exceeding 500 kg the Contractor/FM Provider must:

a. Prepare a Job Safety Analysis for the loading or unloading task;
b. Ensure workers operating any lifting or loading equipment or plant have the required training and operating licences;
c. Ensure appropriate task supervision by qualified supervisors;
d. Wherever possible, eliminate the need for vehicles to reverse on the worksite, or where possible, create a dedicated reversing area and prevent the entry of unauthorised persons and vehicles to that area;
e. Where it is not possible to avoid using reversing vehicles, use trained spotters to guide reversing vehicles on the worksite;
f. Ensure lifting equipment used shows a tag indicating the safe working load and the manufacturer's operating instructions;
g. Create and maintain an appropriately-sized exclusion zone with temporary barriers and warning signs around the loading or unloading activity;
h. There is sufficient space to deploy outriggers and use the lifting gear assigned to the task;
i. The work area is a safe distance away from excavations, shoring, trenches, buried utilities, foundations and overhead power lines;
j. Ensure the vehicle being loading or unloaded is on firm, level, stable and suitable ground;
k. Ensure the designated driving areas at the worksite are free of potholes, soft ground and any other impediments to the safe movement of heavy loads;
l. Ensure there is sufficient clearance between the vehicle being loaded or unloaded and other structures and plant;
m. Offloaded materials or equipment is placed in a designated worksite location suitable for that material or equipment.

Loading Vehicles at Worksite

1136. Before loading vehicles weighing more than 500 kg with loads exceeding one tonne, the Contractor/FM Provider must ensure:

a. The vehicle is suitable for the task, e.g. low platform vehicles when transporting large construction equipment;
b. The vehicle operators and loaders have the mandatory training required to operate the vehicle and load it safely in accordance with regulatory requirements and NZTA Waka Kotahi guidance;
c. Loose bulk loads e.g. excavated material do not exceed maximum vehicle and axle weights, and loose loads are properly secured after loading using tarpaulins, netting or sheeting as appropriate,; and
d. Construction equipment or other plant with components with freedom of movement, e.g. booms or superstructure, are effectively secured. That includes properly securing construction vehicles and other equipment to the carrying vehicle and not relying on inherent skidding resistance from applied brakes.

Using a Truck Mounted or Mobile Crane or Hoist When Unloading at the Worksite

1137. See 15.4 Lifting Equipment, Cranes & Load-Lifting Work Platforms & Mobile Elevating Work Platforms (MEWP) for further guidance.

Tipping Loads

1138. Wherever possible and practicable, the Contractor/FM Provider must eliminate the need for tipping trucks to unload materials or plant and instead use vehicles that include a walking floor, load ejector system or a belly dumper.

1139. When managing the delivery of materials or plant using a tipping vehicle, the Contractor/FM Provider must:

a. Before tipping ensure the tipping vehicle's load is evenly distributed, it can release its load safely, and the load will not jam in and/or the vehicle's tailgate or any opening or chute
b. Ensure the tipping site is clear of persons, obstructions, plant, or other construction materials;
c. There is sufficient space at the tipping site to ensure safe manoeuvring of the vehicle and the tipping of the materials or plant;
d. All persons within the tipping area are made aware of the tipping action before it occurs;
e. Use trained spotters to guide drivers when manoeuvring vehicles, particularly when turning or reversing;
f. Ensure tipping occurs a safe distance from overhead power lines;
g. Ensure, where it is owned and/or operated by the Contractor/FM Provider or sub- or subordinate contractor, that the tipping vehicle is fit for purpose, i.e. is serviced regularly and maintained and monitored in accordance with manufacturing instructions and any other relevant guidance; and
h. Ensure tipping vehicle drivers possess the relevant driving licence, training and familiarity with the vehicle to operate it safely, and applies safe and good practice to the tipping manoeuvre.

Light Vehicles

1140. Where light vehicles and trailers are used to move materials and plant to and from the worksite, the Contractor/FM Provider must ensure that:

a. Vehicle operators and workers comply with the regulatory requirements and operational guidance applicable to light vehicles used for materials and plant transport;
b. Trailers towed by light vehicles

AUDIT/INSPECTION

1141. The Contractor/FM Provider must regularly inspect vehicle and unloading activities to determine compliance with the requirements set out above and related WorkSafe guidance using the Checklist below.

1142. DEI will regularly spot-inspect vehicle loading and unloading activities for compliance with the specifications and WorkSafe New Zealand guidance, and audit the Contractor/FM Provider's inspection process.

REPORTING

1143. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

17.37 Vehicle Load Management Checklist

17.38 Securing and Covering Loads

POLICY

1144. The Contractor/FM Provider must ensure that loads transported to and from the worksite are secured and/or covered through the effective use of appropriate controls.

1145. That includes ensuring plant and building supplies suppliers correctly secure and/or cover their loads through the use of effective controls, and notifying those suppliers when they fail to correctly do so.

SPECIFICATIONS

1146. The Contractor/FM Provider must ensure that:

a. Workers apply effective worksite-related measures such as:

(1) Vehicle access platforms; and

(2) Ensuring the loading/unloading site is fit for purpose, and a safe distance from other workers and vehicles.

b. Load securing and covering machinery and other elements are working and/or fit for purpose, and regularly inspected and maintained according to manufacturer guidelines, or notifies the relevant PCBU where its equipment proves unsatisfactory or in need of maintenance;

c. Workers have the:

(1) Requisite training and capability to manage loads delivered to or leaving the worksite; and

(2) Wear the correct personal protective equipment.

d. It has assigned sufficient workers to tasks to ensure that they are safely accomplished

AUDIT

1147. The Contractor/FM provider must regularly inspect vehicle load health and safety management measures to ensure they achieve a health and safe outcome for worksite workers.

1148. DEI will regularly spot-inspect load securing and uncovering activities for compliance with the specifications and WorkSafe New Zealand guidance, and audit the Contractor/FM Provider's inspection process.

REPORTING

1149. The Contractor/FM Provider must make the results of inspections available to DEI upon request.

TEMPLATES

17.37 Vehicle Load Management Checklist

REFERENCES

Keeping safe while securing and covering loads on vehicles, WorkSafe New Zealand, September 2023

17.39 Tipping Loads

POLICY

1150. The Contractor/FM Provider must ensure that workers are kept safe when vehicles are tipping loads on the worksite.

SPECIFICATIONS

1151. The Contractor/FM provider must ensure that:

a. Wherever possible, load tipping it replaced with other delivery or load dispersal/unloading methods;

b. That the tipping site is fit for purpose, being sufficiently clear for the vehicle to manoeuvre on, and is without:

(1) Ground stability issues;

(2) Overhead obstructions; or

(3) Unmarked or notified obstructions; and

(4) Tipping faces/edges are marked and are notified to the tipping vehicle operator

c. The vehicle is fit for purpose, and is regularly inspected and maintained;

d. Vehicle drivers and worksite workers are trained and competent in managing load tipping, and using the appropriate personal protective equipment, have set a suitable exclusion zone for the tipping operation and are using spotters.

AUDIT

1152. The Contractor/FM Provider must regularly inspect its load tipping health and safety measures to ensure that they are achieving healthy and safe outcomes for worksite workers.

1153. DEI will regularly spot-inspect vehicle load tipping activities for compliance with the specifications and WorkSafe New Zealand guidance, and audit the Contractor/FM Provider's inspection process.

REPORTING

1154. The Contractor/FM Provider must make the results of inspections available to DEI upon request.

TEMPLATES

17.37 Vehicle Load Management Checklist

REFERENCES

Keeping healthy and safe when tipping loads, WorkSafe New Zealand, August 2022

17.40 Working on the Road or Roadside

POLICY

1155. The Contractor/FM Provider must ensure, so far as practicable, that workers engaged in work on roads or the roadside are kept safe during the course of their duties.

SPECIFICATIONS

1156. The Contractor/FM Provider must ensure that:

a. Wherever possible risks associated with work on roads or the roadside are eliminated or mitigated through the adoption of appropriate control measures;

b. Workers engaged in road or the roadside tasks are trained and equipped to perform their tasks safely, e.g.

(1) Workers have relevant temporary traffic management (TTM) qualifications from acting as a traffic controller;

(2) Workers have the correct licenses and training to operate mobile plant; and have

(3) Industry required health and safety and site access training.

c. Prior to work beginning, a hazard and risk assessment is undertaken and appropriate control measures are identified and applied.

AUDIT/INSPECTION

1157. The Contractor/FM Provider must regularly inspect the safety measures applied for worker health and safety for work on roads or on the roadside.

1158. DEI will regularly spot-inspect road and/or roadside working activities for compliance with the specifications and WorkSafe New Zealand guidance, and audit the Contractor/FM Provider's inspection process.

REPORTING

1159. The Contractor/FM provider must make the results of inspections available to DEI on request.

TEMPLATES

4.5 Traffic Management Inspection Checklist

REFERENCES

Keeping healthy and safe while working on the road or roadside, Guidance for PCBUs, WorkSafe New Zealand, August 2022

18 ENVIRONMENTAL MANAGEMENT GUIDANCE

INTRODUCTION

1160. The Contractor/FM Provider must consult with DEI Environmental Services when managing worksite environmental matters.

1161. Environmental regulations and resource consents set environmental management requirements. The Contractor/FM Provider must comply with all compliance matters set by DEI Environmental Services. The Contractor/FM Provider may be required to prepare some or all of the following to demonstrate how they will comply with all environmental regulatory matters for works on the Defence Estate:

a. Environmental Management Plan
b. Contaminated Site Management Plan
c. Erosion & Sediment Control Plan;
d. Dust Management Plan; and
e. Project Waste Management Plan

1162. The specifications in this chapter are not exhaustive. Contractors/FM Providers must consult with DEI Environmental Services though their DEI representative (i.e. Project manager, Estate Deputy Director, etc.) while in the planning stage and prior to work commencing on any Defence Estate. The DEI Environmental Services will advise on environmental hazards, controls, requirements, and considerations specific to the contractor's site and work tasks.

1163. Add words to the effect that any PTW does not include automatic clearance or approval by DEI ES that the requirements for environmental consents have been satisfied – a conversation MUST take place with DEI ES

1164. **The three sections of the Supplement are for the Contractor/FM Provider's awareness, and specific environmental controls must be discussed with and agreed to by DEI Environmental Services.**

18.1 Erosion & Sediment Control Guidance

POLICY

1165. Earthworks of all types, including excavations, site grading, laying fill, pile driving, and unpaved roads have the potential to cause erosion and sediment runoff. Runoff management prevents unwanted sediment entering waterways or the sea where it degrades habitats and creates oxygen depletion through excess nitrogen promoting algae blooms. Runoff carrying pollutants like cement, paint, thinners, chemicals, oil and heavy metals kills flora and fauna, and further degrades fragile river, estuarine and marine environments.

1166. To stop runoff from its worksites, DEI requires the Contractor/FM Provider to prepare an *Erosion and Sediment Control Plan (ESCP)* as part of the *Construction Safety Management Plan (CSMP)*. The set objective for the *ESCP* is nil runoff from the worksite into waterways or nearby land.

1167. The *Erosion and Sediment Control Plan* must also integrate with the camp or base's runoff management plan.

SPECIFICATIONS

1168. The *ESCP* must set out the measures the Contractor/FM Provider will put in place to prevent runoff from the worksite and related surrounds. Depending on the location the measures may include, but not be confined to:

a. Retaining walls;
b. Vegetable materials like mulch, hay, or pea straw to cover exposed soil;
c. Grass berms;
d. Covered soil stockpiles;
e. Silt fences;
f. Erosion control blankets;
g. Clean rainwater diversion;
h. Earth bunds;
i. Swales;
j. Site drainage into catch pits or water filtration systems;
k. Stabilising worksite entrances;
l. Stabilising and managing worksite trenching;
m. Dewatering using settlement tanks or filtration systems;
n. Manage concrete pumping and washout to prevent concrete spills and exposed aggregate runoff entering waterways;
o. Managed areas for equipment wash down, painting equipment cleaning, brick, tile and masonry cutting;
p. Connecting building, facility or services storm water reticulation to the camp or base's storm water reticulation as soon as possible; and
q. Clearing or dewatering infrastructure or service access points e.g. manholes, pits and ducts.

1169. Runoff from site access roads, parking lots or areas set aside for contractor and worker work and private vehicles, must be managed either by DEI on behalf of the camp or base, or by the Contractor/FM Provider as part of its *ESCP.*

1170. The worksite must be able to cope with significant rain events, with the Contractor/FM Provider responsible for designing and installing systems capable of managing runoff from such events, and removing excess water on the worksite.

1171. The Contractor/FM Provider and sub- and subordinate contractors must not store surplus material outside the erosion and sediment-controlled area, and in the event of a construction or demolition project needing substantial amounts of piled building materials, any areas where materials are stored outside the worksite erosion and sediment controlled area, must have their own separate *Erosion and Sediment Control Plan.*

1172. After the project is completed, prior to handover to DEI, the Contractor/FM Provider must decommission the control measures, clean out sediment traps, remove any accidental spills into local drainage services, and revegetate and/or stabilise the site.

AUDIT/INSPECTION

1173. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications referring to the checklist listed below for guidance.

1174. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below, and audit the Contractor/FM Provider's inspection process.

REPORTING

1175. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

18.1 Erosion and Sediment Control Plan checklist

REFERENCES

Builder's Enviro Guide, Auckland Council
Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region, Greater Wellington, February 2021
Erosion and Sediment Control Guidelines for Small Sites, Environment Canterbury

18.2 Dust Management Guidance

POLICY

1176. Dust generated by construction, ground disturbance or road works risks project staff by being small enough (10 microns and below) to fall into the range of respirable dust (see *Respirable Hazard Management*).

1177. The Contractor/FM Provider is responsible for:

a. Controlling dust on the worksite and preventing it affecting worksite operations; and
b. Ensuring it does not escape the worksite and affect the operations of NZDF camps and bases.

SPECIFICATIONS

1178. The Contractor/FM Provider, in conjunction with the camp or base, will determine wind conditions for the worksite, and apply that information when establishing dust control measures.

1179. The Contractor/FM Provider must prepare a *Dust Management Plan (DMP)*, which must identify and implement the most applicable dust control measures relevant to the worksite and approaches.

1180. The *DMP* may apply applicable dust management methods include, but are not confined to:

a. Chlorides;
b. Dry polymers;
c. Dust barriers;
d. Liquid dust suppressants;
e. Mulch and reseeding;
f. Rock bags;
g. Site compaction and soil surfactants;
h. Stones or metal;
i. Sweep equipment;
j. Tillage; and
k. Water carts.

AUDIT/INSPECTION

1181. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1182. DEI will regularly spot-inspect the worksite for compliance with the specifications using the checklist below, and audit the Contractor/FM Provider's inspection process.

REPORTING

1183. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

TEMPLATES

Dust Management Inspection Checklist

REFERENCES

Good Practice Guide for Assessing and Managing Dust, Ministry for the Environment, November 2016
Dusty work and use of controls among construction workers, Waikato Region, WorkSafe New Zealand, April 2019
Dust Management Plan, WRM Limited, April 2018

18.3 Project Waste Management & Recycling Guidance

POLICY

1184. The Contractor/FM Provider is required to use ethical disposal methods for worksite waste, with a focus on recycling of worksite waste, in support of the *Waste Minimisation Act 2008* requirements wherever practicable.

1185. The Contractor/FM Provider must develop and execute a *Project Waste Management Plan* as part of the *Construction Safety Management Plan (CSMP)*. It must align its outputs with the targets set out in the overall Project Waste Plan and the camp or base Waste Management Plan and it must include processes to:

a. Reduce building materials through design and effective quantity surveying, including using modular, prefabricated or preassembled structural and other components and accurately forecasting materials required;
b. Effectively and safely manage hazardous waste and contaminated soil;
c. Reduce, reuse and/or recycle other construction waste, with an overall target of 70 per cent reduction for construction and 50 per cent for demolition from the base case of transporting everything to a landfill;
d. Reuse materials wherever possible;
e. Recycle through on-site waste management with bin segregation, labelling, recycling stations and supplier waste programmes;
f. Provide for effective storage of building materials to reduce wastage;
g. Return unneeded material to suppliers in a resale ready condition;
h. Educate workers on the objectives, targets, and how-to elements of the *Project Waste Management Plan* through the worksite induction process and ongoing worker engagement forums; and
i. Monitor and report on each waste stream.

SPECIFICATIONS

1186. The Contractor/FM Provider must:

a. Assign responsibilities for managing waste on the worksite;
b. Provide locations on the worksite for safe sorting and storing of waste materials;
c. Use accredited waste sorters and recyclers;
d. Create waste disposal targets and incentives for workers;
e. Make waste reduction a feature of sub-contractor and subordinate contractor contracts; and
f. Protect waste storage sites from the environment and ensure effective management of runoff.

1187. The Contractor/FM Provider must create a Waste Disposal Register using the template listed below.

1188. The Contractor/FM Provider must make available all financial records relating to worksite waste disposal to DEI upon request.

AUDIT/INSPECTION

1189. The Contractor/FM Provider must regularly inspect the worksite for compliance with the specifications, referring to the checklist listed below for guidance.

1190. DEI will regularly inspect the worksite's waste storage and management processes using the checklist below, and audit the Contractor/FM Provider's inspection process.

REPORTING

1191. The Contractor/FM Provider must make available the results of inspections to DEI upon request.

1192. At the completion of the project, the Contractor/FM Provider must prepare an end-of-project waste management report, which must include all contracts, receipts and any other paperwork generated with landfills, waste disposal facilities and recycling facilities over the course of the project.

TEMPLATES

18.3 Waste Management Inspection Checklist

REFERENCES

Hazardous Waste Guidelines, Ministry for the Environment, May 2004
Waste Reduction – Construction, Rebri Series, BRANZ, March 2014
Building without waste – Guidelines to support your site waste plan – Best practice guide to reducing waste on construction and demolition sites, Hamilton City Council,

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DOCUMENT DEPENDENCIES

The following related documents may require review or amendment if this document changes.

Document name	Location (link/path)
CHESS – DEI health and Safety Guide	http://ddms-r/ds/D0-0221/14/Forms/AllItems.aspx
CHESS – Processes and Procedures	http://ddms-r/ds/D0-0221/14/Forms/AllItems.aspx
CHESS Templates	http://ddms-r/ds/D0-0221/14/Forms/AllItems.aspx
CHESS Approvals scanned signatures	

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