Suspended Loads Critical Risk Standard

Contents

1. PURPOSE

PMNZ recognises that the risks associated with Suspended loads can result in injury or death. This is typically as the result of the inadvertent movement or failure of the lifting equipment itself or the loads they are moving. PMNZ has a number of activities that require the suspended loads. The focus of this critical risk standard relates to the load or object that is being lifted or moved by crane, but more broadly speaking it is any lifting operation whether by crane, toplifter or other plant used for lifting objects, vessels, logs or containers.

The purpose of this Standard is to manage the health and safety risks associated with suspended loads.

2. SCOPE

This standard applies to all PMNZ sites and operations.

If PMNZ is involved in any Project requiring suspended loads, managed by any third party, PMNZ will ensure that the standards and policies of the controlling PCBU are consistent with those of PMNZ. PMNZ will consult, communicate and coordinate with other PCBUs and stakeholders as required to ensure that standards are maintained, and appropriate due diligence exercised.

3. AUTHORITIES AND RESPONSIBILITIES

Role	Responsibilities
The Company (PCBU) & Officers	The PCBU & Officers of PMNZ have a responsibility to: ▪ Exercise due diligence to ensure all duties and obligations under HSWA 2015 are met including eliminating/minimising risks to health & safety so far as is reasonably practicable.
Critical Risk Sponsors (SLT)	Critical Risk Sponsors are responsible for: ▪ ensuring the requirements of this standard are adhered to. ▪ ensuring that adequate resources are available to ensure the full implementation of this standard.
Critical Risk Owner	The MPV Critical Risk Owner is responsible for: ▪ ensuring this standard is implemented, kept up to date, and reported on. ▪ providing coaching to managers as required.
Managers	Managers have a responsibility to: ▪ ensure the requirements of this standard are met within their area of responsibility
Workers	Workers have a responsibility to: ▪ ensure the requirements of this Standard are applied where relevant to their roles.

	▪ Operate MPV safely and seek further information and advice if they do not believe they are competent to do so.

4. SUSPENDED LOADS

4.1 RISKS ASSOCIATED WITH SUSPENDED LOADS

The following includes but is not limited to, key risks associated with suspended loads:

- Lifting loads over people.
- Lifting equipment failing (uncertified or underrated for activity).
- Unstable ground/surface for lifting equipment.
- Operator error (unlicensed, not competent).
- Adverse environmental/weather conditions.
- Unstable or insecure load.
- Crush injury between suspended load and stationary object.
- Crush injury due to part of body being pinched by lifting equipment such as chains, strops and rope.

4.2 GENERAL REQUIREMENTS FOR SUSPENDED LOADS

The following sets out general minimum requirements for the control of risks associated with suspended loads:

- Complete crane lift permit for loads exceeding 5T and for loads less then 5T as deemed necessary by the operational area manager.
- Lift plans as required.
- Implement and manage exclusion zones.
- Identify and comply with safe working load limits.
- Ensure lifting equipment is fit for purpose.
- Ensure lifting equipment is maintained in a safe condition (tagged & certificates).
- Ensure safe load configuration and stability.
- Ensure competent crane/lifting operators and dogger.

4.3 ACTIVITIES INVOLVING SUSPENDED LOADS

The following include but are not limited to, PMNZ activities that result in the presence of suspended loads:

- Land based container movements.
- Land based log movements.
- Ship loading and unloading.

- Workshop maintenance activities
- Construction Activities
- Material storage
- Vessel haul out with or without travel-lift
- Fixed cranes at marinas and remote sites
- Forklifts to be included in scope
- Gangway Installation
- Log truck trailers

4.4 Critical Controls For Managing the Risks of Suspended loads

4.4.1 Crane Commissioning, Operation, and Decommissioning

Fixed crane commissioning/decommissioning plans must be established prior to installation/dismantling of a fixed crane on PMNZ controlled land. The plan should:

- Reflect crane designers/manufacturers requirements.
- Consider adjacent plant plant/structures and public protection (including exclusion zone requirements).
- Competency of those installing/commissioning.
- Certification, engineering and handover to operations.
- Induction and access arrangements implemented.

4.4.2 All lifts must be planned, managed and conducted by a competent person

- All lifts must be planned by a competent person/s.
- All lifts >5 tonnes require a PMNZ Crane Lift Permit.
- All lifting equipment used for suspended loads must be specifically designed and certified for the purpose of lifting.
- A lift plan must be completed for all crane lifts.

4.4.3 Lifting Equipment safe working limits must be identified and Never Exceeded

- All lifting equipment must be clearly marked with load ratings.
- Rated capacities of lifting equipment must never be exceeded.
- Lifting equipment must have isolation mechanisms in place that prevent lifting above radius and lost limits.

4.4.4 All Lifting Equipment must be fit for purpose and inspected, certified and maintained to ensure its integrity

- Lifting equipment must be tagged showing that required periodic inspections and maintenance have taken place and that the lifting equipment meets requirements.

- A register of lifting equipment should be in place an identify the lifting equipment and its last test/maintenance date and result.

4.4.5 ALL LIFTING EQUIPMENT AND LOADS MUST BE CONFIRMED AS SAFE AND STABLE BEFORE BEING USED.

- Daily pre-start inspections and/or function tests must be completed for cranes, lifting appliances, and lifting equipment by a competent person.
- Where defects are identified, equipment must be immediately tagged out of service.
- Ground conditions should be assessed and then levelled and compacted as required to provide stable support for the lifting equipment e.g. outriggers.
- The offset of a crane outrigger from the top edge of an embankment or retaining wall must be determined through a ground bearing capacity assessment but shall be no less then 2m without written approval from GM Infrastructure.
- All lifting equipment including outrigger points, should be protected from contact.
- All loads must be secured and the risk of load shifting assessed and managed including the impact of weather.
- The presence of live utility services must be assessed and managed.
- Ensure wharf structure load limits are understood and not exceeded.
- All crane lifts being completed using floating plant (barges) must comply with the MNZs barge stability guidelines. Any lifting scenario outside of a vessels stability books requires a specific stability assessment and diagram from a naval architect.

4.4.6 ALL PERSONS INVOLVED IN SUSPENDED LOADS MUST BE COMPETENT TO DO SO.

- All lifting equipment operators and rigging crew must hold the competencies as outlined in Section 5 of this Standard as a minimum.
- All lifting equipment operators and rigging/dogger crew must have their competency verified prior to commencing suspended loads.

4.4.7 EXCLUSION ZONES

- Exclusion zones must be in place to ensure no loads are lifted, suspended or placed over people.
- Exclusion zones consist of an area with a physical barrier around the perimeter to restrict access to authorised persons only. The type of barrier used depends on the scale of the project and will range from permanent 1.8m security fencing to temporary barriers such as pedestrian gates.

Add lifting equipment on floating plant

4.5 PERMIT TO WORK

Prior to any crane lift over five tons a Crane Lift Permit must be obtained from PMNZ. This will require consultation with and written notification to PMNZ Engineers.

The Crane Lift Permit will not be authorised until:

- The competency of those carrying out the lifting operation has been verified.
- It is confirmed that all lifting gear is fit for purpose, holds current certification.
- Has been inspected prior to use and all functional components including safety mechanisms are good working order.
- It is confirmed that safe load limits for the lifting equipment is understood and appropriate for the load to be lifted.
- Lift plans have been completed where required.
- Exclusions zones have been identified and put in place.
- The environment in which the lifting operation is to take place has been risk assessed including ground stability, weather, services, and other port users.

4.6 Emergency Response Plan

Appropriate emergency response procedures and provisions reflecting the nature of potential incidents associated with a lifting operation shall be identified and established.

This includes an emergency put down location (drop zone).

5. TRAINING & COMPETENCY

All people involved in the planning, permitting, carrying out, and monitoring of suspended loads must have the skills and knowledge to understand the hazards and associated risks of suspended loads, Crane Lift Permit requirements, and the control measures required to be implemented to effectively manage the risks associated with these activities.

Appropriate training must be provided to workers who:

- Plan suspended loads including those who undertake hazard identification or risk assessment in relation to suspended loads.
- Set up and/or carry out suspended loads.
- Issue Crane Lift permits.
- Receive Crane Lift permits.
- Dogmen and/or safety observers

All persons with work activities related to suspended loads shall be trained and assessed as competent to perform those activities. The following sets out minimum training requirements for certain suspended loads:

Permit Issuers	PMNZ Permit to Work system/issuers training. Hazard management Confined Space Entry (US 17599)
Permit Receiver	PMNZ Permit to Work system/receivers training. Relevant lifting Equipment specific unit standards as outlined below.
Cab controlled Gantry Crane	PMNZ induction NZQA US 3790 Preferably Level 3 NZ Certificate in Cranes
Pendant -controlled Gantry Crane	PMNZ induction NZQA US 3800 Preferably Level 3 NZ Certificate in Cranes
Self-Erecting Tower Crane	PMNZ induction NZQA US 3789 & 20208 Preferably Level 3 NZ Certificate in Cranes
Truck Loader Crane	PMNZ induction NZQA US 3795 &/or 16617 Preferably Level 3 NZ Certificate in Cranes
Crawler Cranes	PMNZ induction NZQA US 3789 & 20526

	Preferably Level 4 NZ Certificate in Cranes
Mobile Cranes	PMNZ induction NZQA US 3789 & 3795 Preferably Level 4 NZ Certificate in Cranes
Non slewing Articulated Crane	PMNZ induction NZQA US 3789 & 24511 Preferably Level 4 NZ Certificate in Cranes
Forklift	PMNZ Induction F Endorsement – NZ Drivers Licence NZQA10851 Powered industrial lift truck.
Tower Crane	PMNZ induction NZQA US 3789 & 3794 Preferably Level 4 NZ Certificate in Cranes
Mini Crane	PMNZ induction NZQA US 3789 & 26505 Preferably Level 4 NZ Certificate in Cranes
Rigger/Dogger	NZQA US 3789 Sling varied regular loads and safely direct a crane during crane operations

All trained persons must have their competency reassessed every two years.

In addition, those involved in confined space entry must also be trained in, and conversant with the relevant (to them) provisions of this PMNZ Suspended loads Standard. As a minimum these will be addressed in Induction programmes with a reference to this Standard.

6. Monitoring and Review of Application

Monitoring and review of application of this standard will be performed on a regular basis. The frequency of these will be dictated by the nature of the lifting operation and associated activity. The PMNZ Permit to Work System and Permit Issuer will determine the nature and frequency of this for work carried out under a Crane Lift Permit. The Critical Risk Management Framework will also provide guidance on critical control monitoring.

7. Associated Documents

- PMNZ Critical Risk Management Framework
- PMNZ Hazard and Risk Management Procedure

- PMNZ Permit to Work Procedure
- PMNZ Health and Safety Management System (HSMS)

8. REFERENCES

8.1 RELEVANT LEGISLATION

Legislation available at http://www.legislation.govt.nz

- Health and Safety at Work Act 2015
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
- Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016
- Health and Safety at Work (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999

8.2 OTHER DOCUMENTS

- WorkSafe Approved Code of Practice for Load Lifting Rigging December 2012
- WorkSafe Approved Code of Practice for Cranes January 2010
- Maritime New Zealand Interim Technical Notice ITN-11-18: Standard for the inspection of wire rope used on ship's lifting appliances in New Zealand.
- NZ Crane Association: Safecrane.nz

9. REVIEW

This document will be reviewed every two years or after any critical event associated with it. The Review will be performed by the Critical Risk Owner in consultation with key stakeholders, and any changes agreed by the Critical Risk Panel.

10. REVISION HISTORY

Version	Date	Brief Description of Changes	Owner
V001	10.04.24	New Document	GM-HSW