Title	**Plan and document lifts of regular and irregular loads using multiple cranes**		
Level	**4**	**Credits**	**20**

Purpose	People credited with this unit standard are able to: – plan and document lifts of regular and irregular loads; – develop and document the lift plan; – develop and document a lift plan for doing a tandem and/or multi-crane lift.

Classification	Cranes > Crane Operation

Available grade	Achieved

Prerequisites	Unit 3789, *Sling varied regular loads and safely direct a crane during crane operations*, or demonstrate equivalent knowledge and skills.

Guidance Information

1 All tasks are to be carried out in accordance with company procedures, and industry good practice found in the following sources:
- a company quality management systems;
- b requirements and guidelines consistent with the Health and Safety at Work Act 2015;
- c government and local government legislation, regulations, and bylaws;
- d *Crane Safety Manual*, version 3.2 or higher, available from http://shop.cranes.org.nz/;
- e *Approved Code of Practice for Cranes*, 2009, (3rd edition) and/or the *Approved Code of Practice for Load-lifting Rigging* and/or the *LEENZ Code of Practice for the Safe Use of Lifting Equipment*.

2 This unit standard is required by the *Approved Code of Practice for Cranes* to operate as a Dogman slinging loads.

3 Definitions
Crane – the definition as given in the Health and Safety in Employment (Pressure Equipment, Cranes, and Passenger Ropeways) Regulations 1999.
Regular loads have the following characteristics – uniform weight distribution; concentric loading or regular proportions; known lifting points; repetitively lifted.
Irregular loads have one or more of the following characteristics: unequal weight distribution, eccentric loading, irregular shape and proportions, with or without set lifting points.

Outcomes and performance criteria

Outcome 1

Plan and document lifts of regular and irregular loads.

Performance criteria

1.1 Assess the site conditions to determine the crane set-up on location and document the lift to accomplish the lift in a safe manner.

Range site conditions may include but are not limited to – vehicles; equipment; ground condition; underground services; power sources; overhead service lines; trees, buildings, and structures; unauthorised people; adverse weather conditions; simultaneous operations; hazards to the environment; pinch points, the load is not as documents, aerodromes;
evidence of six required.

1.2 Identify and document the appropriate crane and rigging configuration to complete the lift safely.

Range must include – capacity, boom length required for job, maximum radius for lift, rigging equipment, load weight, size, lift points.

Outcome 2

Develop and document the lift plan.

Range one regular lift, one irregular lift.

Performance criteria

2.1 Perform calculations of combined weight of load, hook and rigging gear to confirm it is within capacity of cranes and maximum lift radius.

2.2 Identify hazards that may arise from the lift with risk evaluation completed.

Range swinging load, unauthorised people, adverse weather conditions, vision, poor communication, traffic, Safe Load Indicator (SLI), ground conditions, underground services, overhead services, simultaneous operations, equipment failure, obstructions, pinch points, aerodromes;
evidence of four required.

2.3 Identify hazards and associated risks and document controls in the plan.

Range types of plans – lift plan, rigging plan;

hazards – tag lines, sharp edges, loose objects on the load, incorrect rigging, capacity of rigging, rigging discard criteria, centre of gravity shifting, ground conditions, weather;
evidence of four required.

2.4 Identify the people involved in the lift, their responsibilities, and methods of communication.

2.5 Complete a lift plan and have the parties sign-off on the process document.

Outcome 3

Develop and document a lift plan for doing a tandem and/or multi-crane lift.

Range two lifting devices required.

Performance criteria

3.1 Perform calculations of combined weights and load share when doing a tandem and/or multi-crane lift.

Range one of the lifting device must be a crane.

3.2 Identify hazards and document the controls that may arise from the tandem and/or multi-crane lift process and the risk controls for the rigging plan when conducting the lift.

Range swinging load, unauthorised people, adverse weather conditions, vision, poor communication, traffic, Safe Load Indicator (SLI), ground conditions, underground services, overhead services, simultaneous operations, equipment failure, obstructions, pinch points, aerodromes;
evidence of four required.

3.3 Identify the people involved in the tandem and/or multi-crane lift, their responsibilities, and methods of communication and document in the lift plan.

3.4 Complete a lift plan for a tandem and/or multi-crane lift and have the parties sign-off on the process document.

Replacement information	This unit standard was replaced by skill standard 40842.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 September 2019	31 December 2027
Review	2	27 November 2025	31 December 2027

Consent and Moderation Requirements (CMR) reference	0003

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.