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| Crane 9 | Plan lifts for regular and irregular loads |  |

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| **Kaupae** | Level | 4 |
| **Whiwhinga** | Credit | 25 |
| **Whāinga** | Purpose | This skill standard recognises the skills to plan to lift regular and irregular loads, and document a lift and rigging plan including an assisted liftThis skill standard aligns with the New Zealand Certificate in Cranes (Level 4) and may contribute to other programmes of study as appropriate. |
| **Whakaakoranga me mātua oti** | Pre-requisites | Crane 3 is a pre-requisite. Crane 8 is a co-requisite |

**Hua o te ako me Paearu aromatawai |** Learning outcomes and assessment criteria

| **Hua o te ako |** Learning outcomes  | **Paearu aromatawai** | Assessment criteria |
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| 1. Plan to lift, and complete documentation for, regular and irregular loads.
 | 1. Site conditions are assessed to determine crane set-up requirements.
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| 1. Appropriate crane and rigging configuration for the lifts is identified and documented.
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| 1. Combined weight of load, hook and rigging gear are calculated to confirm capacity of cranes and maximum lift radius.
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| 1. Risk evaluation for the lifts is completed, with hazards and controls documented.
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| 1. People involved in the lifts, their responsibilities and methods of communication are identified.
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| 1. Document a lift and rigging plan for a tandem lift.
 | 1. Combined weights and load share are calculated for the lift.
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| 1. Hazards related to the lift, and appropriate controls, are identified.
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| 1. Implement a lift plan
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| 1. People involved in the lift, their responsibilities and methods of communication are identified.
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| 1. Lift and rigging plan are confirmed as completed and sign-off is received from related parties.
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| 1. Implement a Lift Plan
 | 1. Lift Plan is implemented.
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**Pārongo aromatawai me te taumata paearu** | Assessment information and grade criteria

Assessment specifications:

Site conditions may include vehicles, equipment, ground condition, underground services, power sources, overhead service lines, trees, buildings and structures, unauthorised people, weather conditions, simultaneous operations, hazards, pinch points, load differs from documentation, traffic, aerodromes.

Crane and rigging configuration include capacity, boom length for the job, maximum radius for the lift, rigging equipment, load weight, size, lift points.

Documentation must include, for a regular load, the lift plan, and for irregular loads, lift and rigging plans.

Hazards for regular and irregular loads may include tag lines, sharp edges, swinging load, loose objects on the load, incorrect rigging, capacity of rigging, centre of gravity shifting, ground conditions, adverse weather conditions, unauthorised people, vision, poor communication, traffic, safe load indicator (SLI), underground services, overhead services, rigging equipment rejection criteria, simultaneous operations, equipment failure, obstructions, pinch points, aerodromes.

Lift plan for an assisted lift must include two lifting devices (for example, telehandlers, chain blocks, winches), one of which must be a crane.

*Irregular loads* have one or more of the characteristics: unequal weight distribution, eccentric loading, irregular shape and proportions, with or without set lifting points.

*Regular loads* have the characteristics of uniform weight distribution, concentric loading or regular proportions, known lifting points, repetitively lifted.

For the purposes of this standard, *tandem lift* refers to both lifting devices acting together to lift and place a load.

People involved in the lift, will be site-dependent and may include people involved in rigging and lifting operations, and those managing the site.

**Ngā momo whiwhinga** | Grades available

Achieved.

**Ihirangi waitohu** | Indicative content

* Rating charts.
* Health & safety requirements for individual sites.
* Crane capabilities.
* Capabilities of people involved in the lift.
* Examples of completed lift plans and rigging plans.
* Understanding lifting equipment (uses, capacities) and inspection.

**Rauemi |** Resources

Crane Programme Guidance, available from qualifications@waihangaararau.nz.

Approved Code of Practice for Cranes, available from [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

Crane Safety Manual: For Crane Operators & Dogmen (Crane Association of New Zealand), available from [www.cranes.org.nz](http://www.cranes.org.nz).

**Pārongo Whakaū Kounga |** Quality assurance information

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| **Ngā rōpū whakatau-paerewa |** Standard Setting Body | Waihanga Ara Rau Construction and Infrastructure Workforce Development Council |
| **Whakaritenga Rārangi Paetae Aromatawai |** DASS classification | Service Sector > Cranes > Crane Operation |
| **Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga |** CMR | 0025 |

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| **Hātepe |** Process | **Putanga |** Version | **Rā whakaputa |** ReviewDate | **Rā whakamutunga mō te aromatawai |** Last date for assessment |
| **Rēhitatanga |** Registration | 1 | dd mm 2024 | N/A |
| **Kōrero whakakapinga |** Replacement information | N/A |
| **Rā arotake |** Planned review date | 31 December 2029 |

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz to suggest changes to the content of this skill standard.