Crane Operations Minimum Standards

Category 1: Crane Documentation Standards

1.1 Documentation Requirements for Crane Operations Commencement

Before establishing on-site or commencing crane operations, the following documentation must be provided to Main Contractor:

- Risk Assessment (e.g. Job Safety & Environmental Analysis, Task Analysis, Safe Work Method Statement, Risk Register)
- Current Crane Certification (Certificate of Inspection)
- Lifting Equipment Register
- Training and Competency Register(s) - Including relevant NZQA Unit Standard training.
- WorkSafe NZ Particular Hazardous Notification (if applicable)
- Civil Aviation Authority Determination (if applicable)
- Lift Plans
    - Documented
    - Including Load Weight, Radius, Max Working Capacity, Centre of Gravity, Dimension, Rigging Details, Roles and Responsibilities of Personnel, Methods of Communication, Ground Conditions and Wind Speed.
    - CANZ's lift plans (Standard and Complex) templates should be used as a minimum.
    - Crawler and Tower Crane Erection and Dismantle Plan (if applicable).

Category 2: Training, Competency and Supervision Standards

2.1 Competency Requirements for Crane Operators & Dogmen

All individuals conducting crane operations must possess relevant NZQA Unit Standards as specified in the *ACOP for Cranes*.

2.2 Proof of Competence and Direct Supervision

Documented proof of competence must be provided. For individuals undergoing training, dedicated direct supervision is mandatory, and their roles and responsibilities must be specified. Direct supervision involves maintaining visual contact and/or always being within line of sight.

Category 3: Ground Conditions Standards

3.1 Assessment of Ground Conditions

In accordance with *TWfNZ TGN 04:23 – June 2023 Technical Guidance Note*, "a competent person must assess ground conditions".

3.2 Relevant Information Provision by Main Contractor

Main Contractor is responsible for providing any pertinent information that may affect crane setup, such as Geotech Reports and Underground Services Plans.
Overlapping duties must be effectively managed. Collaboration between Main Contractor and Crane Controller is required to establish safe operating capacity in relation to site.

Category 4: Communication and Consultation Standards

4.1 Point of Contact

Main Contractor must appoint a person to assist Crane Controller with site activities that may affect crane operations.
Crane Controller must designate a Crane Lifting Coordinator, who may operate off-site, but should remain available. This could be Crane Operator, if there is only one crane on site.

4.2 Crane Operations Communication

Communication methods must be established between the crane crew, Main Contractor and involved subcontractors.
If using radios, licensed radio frequency channels should be used for communication, with backup options available.
Coordination meetings are mandatory and must include, at a minimum, the dogman.

4.3 Crane Clash Zones

An anti-clash agreement must be in place where multiple PCBUs (Persons Conducting a Business or Undertaking) are operating plant and equipment within the slew zone of the crane(s).

Category 5: Crane and Lifting Equipment Standards

5.1 Crane Certificate and Maintenance

Ensure that the crane possesses current certificates and undergoes maintenance in accordance with the manufacturer's requirements.

5.2 Lifting Equipment Register and Inspection

A lifting equipment register must be maintained, including details of equipment, inspection dates, upcoming inspection dates, and the person inspecting. All lifting equipment used to lift a load must be rated, certified and inspected, as required (including waste and concrete skips, spreader bars etc).

5.3 Equipment Visual Inspection

All lifting equipment must undergo a visual inspection before use.

Category 6: Rigging and Slinging Standards

6.1 Standard Lifts

Standard lifts must be completed by, or directly under the supervision (line of sight) of a dogman holding NZQA Unit Standard 3789, as a minimum.

Standard Lift (definition) *– A routine lift without complicating factors affecting the crane(s) and the load.*

6.2 Complex Lifts

Complex lifts must be conducted by a dogman certified with NZQA Unit Standard 3801.

Complex Lift (definition) *– A complex lift is a non-routine crane lift requiring detailed planning and unusual or additional safety precautions. Complex Lifts may include: irregular loads or loads with unusual weight distribution (centre of gravity), using one or more cranes (winches), a lift with less than the recommended multi-crane safety factors, a lift out of view of the crane operator, technically difficult rigging, lifting personnel, lifting hazardous materials, lifting submerged loads, lifting with no or partial outriggers, lifting on rubber or any lift the crane operator feels should be classed as such. Complex Lifts may require planning by an engineer or similarly competent person.*

6.3 Certified Lifting Points

When using provided lifting points, ensure they are certified (and identified by the manufacturer) for lifting and provide confirmation before commencing the lift.

Category 7: Exclusion Zones Standards

7.1 Physical Exclusion Zones

Physical exclusion zones must be established around lifting activities when multiple PCBUs are operating, such as laydown and landing locations.

7.2 No Persons Beneath Suspended Loads

Under no circumstances are individuals allowed to be positioned directly beneath suspended loads.

Category 8: Weather Conditions Standards

8.1. Weather Monitoring

Weather conditions must be monitored continuously.

8.2 Wind Speed and Direction

Wind speed and direction is critical for safe crane operations and the following must be considered:

- Every load has its own characteristics, such as weight and shape and it will have different wind resistance.
- Use of taglines.
- Crane limits set by the manufacturer.
- Crane Operator's limits. Crane Operators are the most suitable persons to make wind impact assessments.