

Findings report

Mobile crane



Mobile crane results

Mobile cranes can be a significant hazard and cause significant risk when in operation.

Active inspection days **95**

Between July - October 2022

Site visits **80**

SafeWork inspectors aimed to reduce the number of mobile crane incidents in NSW collaborating with crane owners, principal contractors, subcontractors, site supervisors, doggers and operators to ensure safe mobile crane operations, systems and practices are implemented.

Construction site interactions

The common risks related to mobile cranes include:

- crane tip/roll-overs
- people being struck by the load or falling objects from the load
- people being struck/crushed by a crane part
- crane contact with objects such as buildings, scaffolds and powerlines.

The most serious incidents reported to SafeWork NSW over recent years occurred:

- when cranes came into contact with other objects
- when the load has not been secured
- when there was soft ground and inadequate unloading zones.



Job Title

Site Manager **35%**

Site Supervisor **15%**

Director **9%**

Crane Operator **9%**



7 total notices

Due to the high level of compliance on sites a small amount of notices were issued, and some of reasons included plants registration, records, maintenance and managing site risks.

High risk licence check (HRWL)

Currently there are 28,951 persons who hold a mobile crane licence in NSW, including non-slewing mobile crane and slewing mobile crane up to 100 tonnes and/or open. There are a further 57,862 persons who hold dogging licences.



Yes **99%**

No **1%**

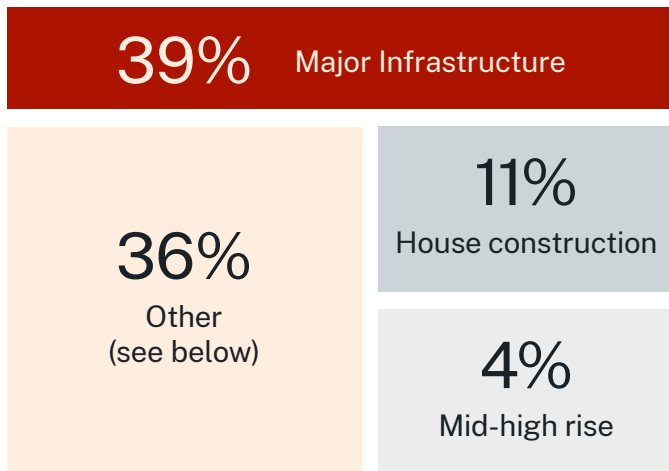
Did you know?

Operators with less than 5 years' experience are likely to be involved in an accident. New operators need support like supervision, ongoing training and mentoring to maintain and build their skills, awareness and expertise.



Mobile crane overview

Sites types




Other: Commercial, industrial, operation centres and depots, civic projects and highways



Crane size



Safety campaign social interactions

 **101,599**

Analytics

352,613 Impressions

34,532 ThruPlays

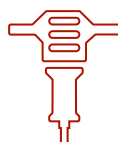
89 Link Clicks

Before you dig Australia (BYDA)

When required, was a BYDA report requested before work commenced?

Yes 56%











No 44%







Observations

Prestart checks and records

 High compliance  Low compliance

-  97% had the mobile crane registered with SafeWork NSW.
-  97% had the logbook that belongs with the crane readily available.
-  99% had the logbook up to date.
-  99% had periodic maintenance inspections recorded.
-  96% had evidence of major service inspections being completed.
-  98% had the operator's manual with the crane.
-  100% had the load chart specific for the crane available to the operator.
-  97% had a documented pre-start check been completed, including checking of fitted safety devices.
-  99% had a legible compliance plate in a prominent position.
-  99% of the crane inspected were in a serviceable order.

Mobile crane observations (pre-job planning)

-  100% of PC/PCBU inducted the crane crew onto the site.
-  99% had evidence of adequate consultation regarding job planning.
-  100% considered the hazards within the load path.
-  93% had a representative from the crane company visit the site prior to the crane arriving.

Observations

Mobile crane observations (Pre-job planning)

▶ High compliance ◀ Low compliance

- ▶ 95% had a site-specific SWMS been prepared.
- ▶ 99% of the PC/PCBU have a copy of the crane SWMS.
- ▶ 100% of PC/Crane companies ensured that there is a suitably qualified person for the crane operations being undertaken.
- ▶ 100% had the crane appropriate for the radius and load of the proposed lifts.

Mobile crane (Site set-up & equipment)

- ▶ 100% of cranes had suitable standing.
- ▶ 97% had adequate controls in place for overhead powerlines.
- ▶ 100% identified and considered underground services.
- ▶ 95% if required, had an Engineers report (structural or geotechnical) prepared and available regarding the crane standing.
- ▶ 100% considered wind conditions.
- ▶ 97% had an adequate exclusion zone in place around crane and lifting / landing zones.
- ▶ 100% had the lifting equipment suitable for the loads to be lifted.
- ▶ 96% had lifting equipment (slings, chains, etc) inspected and found to be in good working order.
- ▶ 100% had a safe system of work/plan e.g., lift plan, being followed on site.

Conclusion

Key messaging on mobile cranes

Our research and inspections have revealed that falling loads, unintended contact with overhead powerlines, buildings, workers, scaffolding or other cranes and cranes tipping or rolling over are the most comment incidents. We also found operators with less than 5 years' experience are likely to be involved in accident. To prevent accidents and keep up-to-date with the latest information please use the www.safework.nsw.gov.au to access resources and tools.

Mobile crane conclusion

This mobile crane intervention program observed a high level of compliance in all the safety categories. These areas were in pre-checks, records, pre-job planning, qualified operators, radius, exclusion zones, load paths, underground services, overhead powerlines, lift loads high-risk work crane and dogging licences, safe slinging and load movements, planning, consultation and communication, and equipment maintenance.

These are encouraging results and reflective of a high industry standard across the mobile crane industry. Safework NSW will monitor the use of cranes across the state and develop an intervention program to address any emerging issues or trends in the future.

Access more information

- [PCBU Tower Crane Checklist](#)
- [Code of Practice - Managing the Risk of Falls at Workplaces](#)
- [Pocket Guide to Construction Safety](#)
- [Guide for Crane Operators](#)
- [Safework SafetyCast on High Risk Work Licences](#)

