

Greetings all. Today's Bulletin is about the critical issue of clear communication between crane operators and ground workers on Australian construction sites.

Effective and standardised communication protocols are essential to safety and efficiency in crane operations, particularly in Australia's dynamic and sometimes challenging work environments.

Here are key measures that should be implemented to reduce the risk of accidents caused by miscommunication.

1. Australian Standards and Regulations

Compliance with AS2550.1, Crane Code of Practice and regulations

- **AS2550.1:** Ensure that all crane operations comply with the Australian Standard AS2550.1, which includes provisions for signalling and communication between the crane operator and the ground crew.
- **Mobile Crane Industry Code of Practice:** Crane use is regulated by the Heavy Vehicle National Law (HVNL), which applies to all vehicles over 4.5t in all states and territories, except Western Australia and the Northern Territory.
- **Safe Work Australia:** Regularly review and comply with [guidelines issued by Safe Work Australia](#) and WorkSafe Victoria (or other State health and safety regulators) which oversee crane safety and provide additional resources for managing risks associated with crane operations.

2. Standardised Signalling Systems

It's important to remember that the Australian workforce is pretty diverse, so make sure these signals are clear and easily understood by everyone.

AS2550.1-2011 states "Where communication is required between the operator and other personnel, a reliable and efficient method of communication shall be established".

Give consideration to any cultural differences that might impact communication, because a reliable method of signalling between the crane operator and the dogger is key to keeping crane operations safe.

Signals may be visual, audible, or a combination of both.

MOTION	HAND SIGNAL	WHISTLE, BELL, OR BUZZER SIGNAL	MOTION	HAND SIGNAL	WHISTLE, BELL, OR BUZZER SIGNAL
Hoisting raise		2 short ●●	Hoisting lower		1 long —
Luffing boom up		3 short ●●●	Luffing boom down		4 short ●●●●
Slewing right		1 long, 2 short — ●●	Slewing left		1 long, 1 short — ●
Jib-trolley out: telescoping boom extend		1 long, 3 short — ●●●	Jib-trolley in: telescoping boom retract		1 long, 4 short — ●●●●
Travel and traverse		Not applicable	STOP		1 short ●

CREEP SPEED: APPROPRIATE HAND SIGNAL FOR MOTION WITH HAND OPENING AND CLOSING

FIGURE 6.14 SIGNALS

Hand Signals:

Official Guidance on Hand Signals

Single Signal Person

- Only one dogger should give signals at a time to avoid confusion. Ensure that the designated signal person is not only trained but also licenced.
- A standardised set of hand signals should be used to communicate commands like hoist, lower, stop, swing, etc.

Operator Responsibilities

- The crane operator should only move loads based on signals from the designated dogger/rigger.
- However, the operator must obey a STOP signal immediately, regardless of who gives it.

Dogger Requirements

- The dogger must be qualified to give crane signals.
- They are responsible for keeping other people outside the crane's operating area.
- Doggers should never direct a load over a person.

Hand signals are especially crucial in situations where:

- The crane operator cannot see the load
- The operator cannot see the load's landing area
- The operator cannot see the path of travel of the load or the crane
- The operator is not in a position to make an accurate judgment of distance

Alternative Communication Methods

While hand signals are important, Safe Work Australia also recognises other communication methods:

- Radio communication (with specific guidelines for safe use)
- Bell, buzzer, and whistle signals (make sure they are loud and can be heard)

It's worth noting that mobile phones are not recommended for directing mobile crane operations.

AS2550.1 specifies that for audible signals, each crane should have a distinct tone if multiple cranes are operating in close proximity.

Radio Communication:

- **High-Quality Equipment:** Use high-quality, reliable two-way radios that can withstand Australia's diverse climatic conditions, including extreme heat, rain, and coastal environments.
- **Standardised Protocols:** Establish radio protocols that are consistent with national standards, incorporating clear, unambiguous language. Avoid slang or jargon that could be misinterpreted, especially by workers for whom English is a second language.

- **Emergency Channels:** Designate specific radio channels for emergency use and ensure all team members know how to access these channels quickly.

3. Training and Education

As with all safety measures, education and training are key.

Make sure you include hands-on practical exercises in the training program to reinforce proper signalling techniques and, if possible, simulate scenarios commonly encountered in crane operations, such as coastal or high-wind environments or noisy construction sites with clanging and banging.

Keep in mind that the crane operator may have the air conditioning running or might not hear things as clearly from inside a cab.

Clear and consistent communication is vital.

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