

Environmental and Occupational Health & Safety Unit

OHS ALERT

Tower Crane Operational Safety Zones (OSZ)

For all erection, dismantling and associated works.

The recent tower crane collapse at Southbank (August 2015) once again highlighted the hazardous and dangerous conditions of our construction industry.

This incident could have been much worse than it was – as an industry we must acknowledge and adhere to the lessons learnt and provide better and safer methods to do the job. What has happened before could all too easily happen again; only next time we may not be so lucky.

It is for these reasons that during erection or dismantling of any tower crane:

An Operational Safety Zone (OSZ) of 50 metres will be enforced. This zone will be measured from the radius of the crane base.

Any work associated with the installation or removal of the machine deck, power-pack, counter-weights or boom of the tower crane, must be

included in this 50m radius OSZ.

During any climbing of the tower crane or rigging of ties to the tower crane, an OSZ of 30m's must be enforced. This includes the installation or the removal of the climbing frame.

Further to this, the top 4 levels of the building must be included as part of the OSZ – that is, no work shall be carried out or conducted on these levels during any of the above works.



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Operational Safety Zones (OSZ)

If, for any reason (e.g. site boundary restrictions) the above OSZ limits cannot be enforced, the site must remain closed for any productive work until the tower-crane works (erection, dismantling and any associated works that come under the above definitions) have been completed.

Each operation must be planned thoroughly with the involvement of and consultation between management, safety committee, employee representatives, crane companies/operatives involved, and where required, clients/neighbours [referred to as the relevant parties]. WorkSafe may be consulted as required.

The below information must also be considered during any work on the tower-crane:

- Barricading – e.g. handrailing, parawebbing and screening
- Barring – e.g. securing doors, stairwells, entrances etc.
- Signage
- Spotters
- Permit systems/exclusion zones

Operational Risk Assessment (RA) and site/task-specific Safe Work Method Statement (SWMS) to be in place with all personnel inducted prior to commencement of operation; this includes any auxiliary

units (mobile cranes, EWPs, etc...)

The OSZ must physically restrict unauthorised personnel from entering. Signage to be displayed, and total area monitored as required.

Where necessary, traffic management and public protection to be in place with appropriate authorities notified, e.g. appropriate Council and/or VicRoads for road closures.

Considerations

- Preparation and coordination – initial and ongoing
- T type of tower crane e.g. diesel/electric luffer, hammerhead, etc...
- Internal or external climber
- Erection
- Climbing (i.e. up or down)
- Dismantling e.g. continuity of operation, structure bound, etc.
- Height of installation – e.g. number of tower sections

Coordination and hours of operation

No-one shall be in the OSZ during tower crane rigging operations, with the exception of personnel authorised and essential to the operation, supervision and auxiliary workers.

With regard to the above considerations and dependent on agreed RA/SWMS/OZS requirements, tower crane rigging operations may take place during normal working hours.

NB: Except in an emergency situation, erection/climbing/dismantling is not to be carried out at night and/or under artificial lighting.

Further considerations

- Task-specific training
- Geography of site/interface of areas and buildings
- Layout/number of cranes
- Environment, e.g. light, wind, rain etc.
- Council/adjoining owners/public protection requirements
- Ancillary equipment (mobile cranes, etc...): placement and control
- Servicing requirements
- Traffic management

Controls

- Engineering for specific type of crane:
 - Diesel Luffer
 - Electric Luffer
 - Hammerhead
 - Other
- Training/competency:
 - Licence/s for High Risk Work
 - Gold Card
 - Training for specific model of crane
 - Trainee status
 - Height safety
 - Other

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