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Investigation and Arrest Following Queensland Concrete Panel Collapse

All employers and principals in the Australian construction industry should be aware of significant recent developments in Queensland following a fatal concrete panel collapse at Brisbane's Eagle Farm Racecourse last month.

Two workers at the site were killed on 6 October when an 11 tonne concrete panel fell and crushed them. At the time they were working in a pit, constructing a large concrete drainage structure below ground level which included four wall panels. It appears three of those panels became unstable when the fourth was being lifted into place by a mobile crane, causing two panels to fall forwards onto the ground, one after the other. The second of these trapped and fatally injured the workers who were unable to escape.

Investigation

Workplace Health and Safety Queensland (WHSQ) is investigating the incident, and has released a safety alert to highlight the potential risks associated with the installation of concrete wall panels, with an added focus on the need for systems to help prevent panels falling.

Depending on the outcome of WHSQ's investigation, prosecutions may be initiated under the State's *Work Health and Safety Act 2011* (Qld), but Queensland Police have already taken action, last week arresting and charging the person in control of the site, Mr Claudio D'Alessandro, with manslaughter under the Queensland Criminal Code.

These developments will have ramifications across the country, with other safety regulators closely following the WHSQ investigation. This is likely to lead to increased scrutiny of similar projects, not only in Queensland but all other States and Territories. Further safety alerts may also be issued.

As a result, all those involved in the Australian construction industry - especially the production and installation of pre-cast and tilt-up concrete wall panels - should review their work processes immediately. This includes anyone who engages contractors to carry out such work.

Safety Alert

The WHSQ alert was issued on 12 October and applies to both pre-cast and tilt-up wall panel erection in Queensland.

It highlights that there can be numerous contributing factors to an incident such as the Eagle Farm wall panel collapse, including:

- inadequate panel restraint due to the lack of appropriate bracing on the face of the panel or insufficient restraint at the bottom;
- panels being knocked by another panel, lifting gear or a crane;
- workers being unable to escape when a panel falls, particularly where work is undertaken below ground level; and
- inadequate work procedures and environmental factors, such as wind and soft ground.

The alert also makes it clear that there must be a detailed plan in place in relation to work with concrete wall panels and some situations may require additional strategies to reduce risks and prevent serious incidents occurring.

For example, these might include developing work arrangements that avoid the need for

workers to enter a pit to install or adjust the placement of concrete panels – such as the design of a bottom restraint, and changes to footings to avoid the need to install shims to level panels during installation. Geotechnical engineers should be engaged to provide advice regarding controlling the risk of earth walls collapsing where work is undertaken below ground level.

Pre-requisites for erecting concrete panels generally are also set out in the alert, which (for Queensland) include:

- the need for certified lifting and bracing designs (and the use of 2 braces as a minimum);
- effective restraint at the bottom edge during installation;
- use of a panel restraint system designed and certified by a suitably qualified professional engineer, with all engineering certification kept on site; and
- ensuring workers involved hold the appropriate high risk work licence.

The alert requires a comprehensive safe work procedure to be developed by any person or firm erecting concrete panels, which must be verified by the principal contractor and specify the responsibilities of all workers involved. The procedure should also set out detailed diagrams detailing information such as the sequence of panel installation steps and the panel restraint system. All workers should be familiar with the procedure before commencing work, and this should be verified in pre-start meetings.

In addition, concrete panel construction work in Queensland is covered by the Tilt-up and Pre-cast Construction Code of Practice 2003, AS 3850.1.2015 and AS 3850.2.2015 (Prefabricated Concrete Elements), as well as the State's WHS Act and Regulations.

Although WHS laws do differ to some extent between Australian jurisdictions, concrete panel work in other States and Territories is also subject to obligations under the same or similar standards, regulations and codes of practice.

Implications

In light of the expected increased focus by regulators following the incident at Eagle Farm, everyone involved in the construction industry (including principals and contractors) should now carefully review their existing safety procedures and work methods in light of hazards associated with pre-cast and tilt-up concrete panel production and installation. This includes having certified lifting and bracing designs certified by a professional engineer.

Because of potential inconsistencies between the requirements of the Australian Standard and the codes of practices across different jurisdictions, as part of your risk assessment and to minimise your risk, strong consideration should be given to adopting the higher standard where such an inconsistency exists.

Contacts

For all enquiries regarding work health and safety matters, our team at Moray & Agnew can assist. We have detailed knowledge of the pre-cast concrete industry and are pleased to work with many of the Association's members.



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