

10/01/2019

Serious Incident

- **Incident date:** 29/10/2018
- **Event:** Prefabricated concrete panel fall on construction site
- **Location:** Bexley

Incident Overview

A 21 tonne, right angle shaped, prefabricated concrete panel was being lifted by a tower crane and a mobile crane in a dual lift. The panel was approximately 9.3 metres long by 2.5 metres wide.

As the panel was being lifted into position the lifting equipment and/or lifting point failed and the panel suddenly dropped. The reason for the failure is not yet known.

A hoist rope was damaged in the incident and the cranes were subjected to shock loading. Debris from the incident landed in a public area next to the site. There were no reported injuries.

SafeWork NSW, NSW Police Force, Fire and Rescue NSW and Public Works Engineers responded to the incident.



Image: A prefabricated concrete panel that dropped during installation.

The site

The site is located in Bexley. Work being done at the site is part of the West Connex motorway project.

The investigation

SafeWork NSW Inspectors responded to the incident.

SafeWork NSW has commenced an investigation to determine the cause and circumstances of the incident.

Our [Prosecution Guidelines \(January 2018\)](#) outline our approach to prosecutions and Safe Work Australia's [National Compliance and Enforcement Policy](#) provides guidance on our approach to compliance. These documents set out factors that will be considered in determining the investigative approach and appropriate outcome.

Safety Information

Persons conducting a business or undertaking (PCBUs) are reminded of their duty to identify hazards and manage risks to health and safety in accordance with the provisions of the [Work Health and Safety Act 2011](#) and [Work Health and Safety Regulation 2017](#).

Principal Contactors and other businesses working in construction have additional and specific duties under Work Health and Safety (WHS) legislation. Those duties extend to the care of both workers and others – including members of the public. Businesses need to provide and maintain safe plant and structures such as lifts and cranes, and risks related to structures collapsing or objects falling need to be managed..

The loads applied to prefabricated concrete elements during lifting depend on many factors. These include the orientation of the concrete element, the size and shape of the element and its centre of gravity, the location and capacity of the lifting points, and the lifting equipment and method used.

The force applied to a crane and lifting equipment can change a lot during a lift. An erection plan is needed to make sure the crane, lifting equipment and concrete element can withstand the applied loads.

The erection plan should be developed in consultation with relevant contractors, including the concrete element prefabricator. It should include drawings that have details on the types and locations of all lifting / bracing / fixing inserts and any component reinforcing.

Documents about the erection plan should be available on site. They should specify the erection sequence and orientation, the correct lifting points, clutches and the rigging details/configuration.

Lifting inserts and clutches must be compatible with each other - seek advice from the item manufacturer if you are unsure. Cranes with sufficient size to use the specified rigging and sling angles, and capacity to handle the calculated load share, must be used.

Before lifting anything, make sure the concrete has reached the required strength and the lift can be done as described in the erection plan. Do not deviate from the erection plan, without agreement of the erection designer.

Further information

Please refer to the following guidance materials:

- AS 3850.1-2015 Prefabricated concrete elements - Part 1: General requirements.
- AS 3850.2-2015 Prefabricated concrete elements - Part 2: Building construction.
- Guidance on sampling and testing systems for concrete is provided in AS 1379 - Specification and supply of concrete.

- Code of Practice – Construction Work
- Code of Practice – Safe Design of Structures

About this information release

We have issued this information to draw attention to the occurrence of a serious incident in the construction industry. Investigations are ongoing and further information may be published as it becomes available.

The information contained in this publication is based on knowledge and understanding at the time of writing. Users are reminded of the need to ensure any information upon which they rely is up to date and to check the currency of the information with the appropriate SafeWork NSW officer or the user's independent adviser. No conclusions should be drawn from the information in this publication about the cause of the incident or the culpability of any party.

All photographs were taken by SafeWork NSW.