

21
July
2022

WSH ALERT

FATAL ACCIDENT

Worker struck by plywood fragment

On 6 July 2022, a Pile Driving Analyser (PDA) load test was being carried out. The test involved a hammer hitting a pile, with a plywood sheet acting as a cushion on top of the pile head. The impact of the hammer on the pile shattered the plywood sheet. A plywood fragment flew towards and struck an Assistant Construction Manager who was in a shed located about 26 metres away. He was sent to the hospital but passed away on 13 July.

Hammer
used for
pile
testing

Pile being
tested



Shattered
plywood
sheet
placed
on the pile
head

Overview of test site.

Recommendations

This case shows the danger of using plywood as a cushion for a PDA load test. To prevent similar accidents, consider the following measures:

- **Choice of cushion material:** Plywood is prone to shattering. Use a material that will not fragment on impact (e.g. commercially available piling cushions made of cast nylon/ polyamide or canvas mixed with plastic resin).
- **Containment of fragments:** Install a piling drive cap over the pile head and cushion to secure the cushion and reduce fragmentation. A casement-type enclosure around the hammer and pile may also be used to contain any fragments.
- **Safe test observation:** Place monitoring equipment in a protected area at a safe distance from the test site. Consider using camera technology (e.g. wireless cameras, drones) to observe the PDA load test from afar.
- **Personal protective equipment (PPE):** Provide all workers in the test site with the necessary PPE (e.g. safety helmet, safety eyewear, safety boots, gloves, hearing protectors and coveralls).

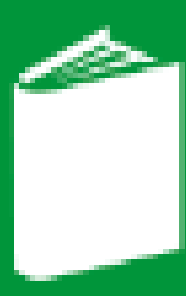
For more information, please refer to WSH (Construction) Regulations 2007 and WSH Council's [Code of Practice on WSH Risk Management](#).

* Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 18 July 2022. This may be subject to change as investigations are still on-going. Please also note that the recommendations provided here are not exhaustive and they are meant to enhance workplace safety and health so that a recurrence may be prevented. The information and recommendations provided are not to be construed as implying liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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