

Hazard Fact Sheet - Drilling & Piling Operations

What is the Hazard?

Drilling and piling involve the use of large drill rigs and heavy steel piles to install the foundations that support solar farm panel structures. These activities involve mobile plant, high-force equipment, and manual handling, with significant risks if controls are not followed.

Types of Injuries / Health Effects

- Crush injuries from plant movement or pile handling
- Struck-by injuries from falling or shifting piles
- Amputation or entanglement injuries from rotating drill components
- Sprains and strains from lifting and guiding piles
- Hearing damage from prolonged noise
- Slip/trip injuries on uneven ground

Causes / Scenarios

- Entering exclusion zones around the drill rig
- Handling long, heavy piles manually
- Unexpected ground conditions (rock, voids, soft soil)
- Poor communication with the operator
- Weather impacts (high heat, storms, wind gusts)
- Fatigue from repetitive physical work

Control Measures

- Stay clear of drill rig exclusion zones unless authorised and remain alert for moving equipment nearby.
- Always communicate with spotters and confirm hand signals or radio calls before moving.
- Use mechanical aids when available and ask for help with heavy or long piles to reduce injury risk.
- Coordinate team lifts with clear countdowns and ensure everyone has solid footing.
- Rotate physically demanding tasks and report any equipment faults before starting work to prevent accidents.
- Never stand between piles and moving machinery to avoid crush or pinch injuries.
- Follow heat stress advice: take shade breaks, hydrate regularly, and slow your pace during hot weather.
- Stop work if storms, high winds, or unclear communication make conditions unsafe.

https://www.safeworkaustralia.gov.au/sites/default/files/2023-12/dec_2023_-_code_of_practice_-_managing_the_risks_of_plant_in_the_workplace.pdf



Safe Work Australia – Managing the risks of plant in the workplace



Case Example:

Worker Crushed by Pile Driver

At a South Australian solar farm, a worker was fatally crushed after entering the operating area of a piling rig. Investigations found poor exclusion zones and unsafe work methods.

Key Lessons Learned:

- Never walk near a running piling machine, stay outside all barriers and marked zones.
- Always wait for the operator or spotter to confirm it's safe to approach.
- If you're unsure where to stand, ask. Piling rigs have blind spots and can move suddenly.