



Engineering Controls for Fall Prevention

CASE STUDY

THE PROBLEM

Having recently installed a significant swag of solar panels onto their industrial building, our client wanted to retrofit upgrades to their roof safety system to ensure their panels were protected and access and movement around the roof was as safe as possible going forward.

THE SOLUTION

After inspecting the site and working through our Hierarchy of Control matrix with the client, we identified numerous engineering controls that could be deployed to improve roof safety.

Engineering controls are higher-level (earlier) interventions that are designed to prevent falls from happening in the first place. This is in contrast with lower level controls — like fall arrest systems and PPE — which will catch and protect you if you fall, but won't stop you from falling.

THE INSTALLATION

- ✓ Guardrails to prevent users from falling down through the roof access hatch
- ✓ Guardrails around the roof perimeter to prevent users falling off the roof edge
- ✓ A walkway from the roof hatch to provide a path for users to the solar panels
- ✓ A walkway alongside the solar panels to provide maintenance access to the panels
- ✓ A bridge (consisting of stairs, a guardrail, handrail and platform) to help users navigate changing roof levels
- ✓ Guardrails with handrail along the divide between one roof level and another to prevent falls

SITE & LOCATION

Industrial building,
Beenleigh, Queensland

SCOPE OF WORK

Install engineering controls to roof following addition of new plant (solar panels)

HEIGHT SAFETY INSTALLATIONS

Guardrails around roof hatch
Guardrails around roof edge
Rooftop walkway from roof hatch
Rooftop walkway alongside plant
Stairs and bridge across roof divide
Guardrails along roof divide

KEY RESULTS FOR CLIENT

- ✓ User-friendly controls such as walkways, guardrails, handrails and bridges that improve safety and are easy to use (vs hooking up to anchor points, static lines etc) and therefore improve work efficiency
- ✓ Inspecting and maintaining the new solar panels has been made both easier and safer
- ✓ Both the solar panels and the roof sheeting are less likely to be damaged due to roof traffic and activity. Greater protection of these assets now mitigates costly repairs later

VALUE ADDED

Increased engineering controls also reduce the need for specialist PPE (eg height safety harnesses and lanyards) for each individual — thereby reducing costs and training needs





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