Sample Risk Assessment and Control Procedure

HIRAC and SWMS-based framework for identifying, assessing and controlling risks during FRP boardwalk installation.

DOCUMENT TYPE
Risk procedure

FRAMEWORK
HIRAC + SWMS

FOCUS
FRP installation

INTRODUCTION

This document outlines a sample risk assessment for the installation of a Fiber Reinforced Polymer (FRP) boardwalk. It follows the Hazard Identification, Risk Assessment, and Control (HIRAC) process, as well as Safe Work Method Statements (SWMS), to ensure comprehensive evaluation and management of risks associated with the task.

RISK MANAGEMENT FLOW

01 — Identify Hazards
Systematically identify hazards associated with installation activities, tools, equipment, materials and site conditions.

02 — Assess Risk
Evaluate each identified hazard using likelihood and severity to establish the risk level.

03 — Apply Controls
Use the SWMS and appropriate control measures to reduce or manage identified risks.

04 — Monitor & Review
Inspect, report incidents and review risk assessments as work conditions and hazards change.

TASK OVERVIEW

Task Description
Installation of FRP boardwalk sections including site preparation, material handling, assembly, and final installation.

Personnel Involved
Site supervisors, installation crew, and safety officers.

Equipment Used
Forklifts, hand tools, power tools, scaffolding, and personal protective equipment (PPE).

Hazard Identification

A systematic review of potential hazards associated with the FRP boardwalk installation process.

3.1 HAZARD IDENTIFICATION

A systematic identification of potential hazards associated with the installation process is performed. The following hazards have been identified:

HAZARD	POTENTIAL RISKS
Manual Handling	Strains and sprains, musculoskeletal injuries
Working at Heights	Falls resulting in serious injury or death
Tool Use	Cuts, abrasions, or other injuries
Forklift Operation	Collisions, crush injuries
Environmental Hazards	Exposure to weather conditions, slips, trips, and falls
Electrical Hazards	Electrocution from tools or nearby power lines
Material Handling	Dropping materials causing injury

HAZARD IDENTIFICATION FOCUS

01 People
Manual handling, working at heights and material handling hazards.

02 Plant & Tools
Forklift operation, hand tools, power tools and electrical exposure.

03 Environment
Weather conditions, slips, trips and other site-specific environmental hazards.

04 Task Interface
Hazards arising from assembly, movement, access and interaction between work activities.

Risk Assessment

Using the HIRAC method, each identified hazard is assessed based on likelihood and severity.

3.2 RISK ASSESSMENT

Using the HIRAC method, each identified hazard is assessed based on likelihood and severity. The risk level is then used to prioritise controls and review requirements.

Hazard	Likelihood	Severity	Risk Level	Controls
Manual Handling	3	2	**Medium**	Training in manual handling techniques; use of mechanical aids.
Working at Heights	2	4	**High**	Use of harnesses and guardrails; training on working at heights.
Tool Use	3	3	**Medium**	Proper tool training, PPE and maintenance checks.
Forklift Operation	2	4	**High**	Only trained operators; exclusion zones; daily inspections.
Environmental Hazards	3	2	**Medium**	Conduct work in favourable weather conditions; proper footwear.
Electrical Hazards	2	5	**High**	Lockout/tagout procedures; maintain distance from power lines.
Material Handling	3	3	**Medium**	Team lifting techniques; clear communication.

OVERALL RISK RATING

High priority on managing risks related to working at heights and electrical hazards.

High-risk activities require focused controls, supervision and ongoing review during installation.

Control Measures - SWMS

The Safe Work Method Statement establishes the procedures and controls for identified installation risks.

4.1 SAFE WORK METHOD STATEMENT (SWMS)

A detailed SWMS is developed for each task to outline the procedures and controls for identified risks.

PREPARATION PHASE

- Conduct a site-specific safety briefing.
- Review SWMS with all crew members.
- Ensure all personnel wear appropriate PPE (hard hats, gloves, harnesses, etc.).

INSTALLATION PHASE

Manual Handling

Use mechanical lifting aids when possible. Train employees in safe lifting techniques.

Working at Heights

Ensure fall protection systems are in place. Use harnesses and secure ladders/scaffolding.

Tool Use

Regular inspection and maintenance of tools. Ensure all workers are trained in proper tool use.

Control Verification

Confirm the required controls are in place before the activity begins and remain effective while work is underway.

CONTROL PRINCIPLE

Controls should be practical, clearly communicated and verified before work proceeds. Where site conditions change, the relevant risk assessment and SWMS should be reviewed before the activity continues.

Operational & Emergency Controls

Additional controls for plant operation, emergency response and post-installation review.

FORKLIFT OPERATION

- Implement exclusion zones around forklift operation areas.
- Conduct daily checks of forklifts before use.
- Only allow trained and accredited operators to use forklifts.

EMERGENCY PROCEDURES

- Establish and communicate emergency evacuation procedures.
- Ensure first aid kits and emergency contacts are readily available.
- Identify on the plans the nearest hospital in case of emergency.

POST-INSTALLATION REVIEW

- Conduct a debriefing session to discuss any incidents or near misses.
- Collect feedback from workers on safety measures and areas for improvement.

REQUIRED SITE DISCIPLINE

01

Exclusion

Maintain separation between people and operating plant.

02

Preparedness

Keep emergency information and first aid resources readily available.

03

Learning

Capture incidents, near misses and worker feedback after installation activities.

Monitoring, Review & Communication

Ongoing inspection, incident reporting and workforce engagement maintain the effectiveness of the risk controls.

5.1 REGULAR INSPECTIONS

- Conduct weekly safety audits to ensure compliance with safety protocols.
- Review and update risk assessments and SWMS as necessary based on new hazards or changes in work practices.

5.2 INCIDENT REPORTING

- Establish a clear procedure for reporting incidents, near misses, and unsafe conditions.
- Maintain a register of incidents for analysis and review to prevent recurrence.

TRAINING AND COMMUNICATION

- Conduct training sessions for all workers on the risks associated with installation tasks and the importance of adherence to SWMS.
- Implement regular toolbox talks to reinforce safe practices and discuss any emerging safety concerns.

PROCEDURE COMMITMENT

This sample risk assessment outlines the systematic approach taken by DM Composites Pty Ltd to ensure safety during the installation of FRP walkways. By identifying hazards, assessing risks, and implementing appropriate control measures, we aim to minimize the potential for accidents and injuries on-site. Continuous monitoring, training, and communication are essential components of our commitment to a safe working environment.