



# DROPPED OBJECTS MANAGEMENT



# WHY DROPPED OBJECTS MANAGEMENT MATTERS

**Dropped objects are one of the leading causes of workplace incidents in construction, oil & gas, and industrial sectors.**

- ▶ Can cause serious injuries or fatalities.
- ▶ Damage to equipment and costly project delays.
- ▶ Preventable with effective controls.

# PRIMARY CONTROLS

## The first line of defense against dropped objects:

- ▶ Use tool lanyards
  - 100% hook-on or secure tools on hard barrier platforms.
- ▶ Transport tools/equipment in rated, self-closing tool bags when using stairs.
- ▶ Use storage bins to secure tools/equipment when not in use.
- ▶ Maintain a high standard of housekeeping to avoid loose items.





# SECONDARY CONTROLS

## Additional protective measures:

- ▶ Establish hard barrier exclusion zones to protect workers below.
- ▶ Define designated drop zones for lifting and scaffolding activities.
- ▶ Install hard barrier protection over walkways where required.
- ▶ Mark no-go zones to restrict access beneath work at height.
- ▶ Never stand under a suspended load.



# LIFT PLANS FOR CRANE LIFTS

## Purpose of a Lift Plan

- ▶ Ensures every lift is planned, risk-assessed, and communicated
- ▶ Confirms equipment, load, and personnel are suitable
- ▶ Reduces the chance of incidents or near misses

## Why It Matters

- ▶ Poorly planned lifts are a major source of dropped objects
- ▶ A Lift Plan ensures every load is secure, stable, and controlled from start to finish

# CRANE LIFT CONTROLS

- ▶ Identifies potential drop zones and sets up exclusion areas
- ▶ Confirms **load weight, rigging method, and balance** are correct
- ▶ Ensures **lifting gear is inspected and certified**
- ▶ Includes **wind and weather limits** to prevent swinging or loss of load
- ▶ Details **tag line use** to maintain load control
- ▶ Requires a **pre-lift check** and communication between crane operator, rigger, and spotter



# EWPS (ELEVATING WORK PLATFORMS)

These are mechanical platforms that lift workers, tools, and materials to height for temporary access.

- ▶ Examples: boom lifts, scissor lifts, truck-mounted or trailer-mounted lifts.

## Dropped Object Considerations:

- ▶ Tools or materials can fall during movement, extension, or rotation of the boom.
- ▶ The basket floor and rails are potential drop points.
- ▶ Swing radius creates a wide risk zone below.
- ▶ Workers often handle or transfer tools while elevated, increasing drop potential.





# EWP CONTROLS

- ▶ Use tool lanyards and tethering systems at all times.
- ▶ Fit mesh or toe boards to prevent small items falling.
- ▶ Set up exclusion zones beneath and around the full boom reach.
- ▶ Keep the platform tidy and free of loose materials.





# MOBILE WORK PLATFORMS (MWPS)

These are smaller, manually or mechanically moved platforms used for low to medium-height work — such as mobile scaffolds, podium steps, or rolling towers.

## Dropped Object Considerations:

- ▶ Hand tools or fittings may fall through open edges or while being passed up/down.
- ▶ People often work directly below or beside these platforms.
- ▶ Movement across uneven ground can cause tools or materials to shift or fall.



# MWP CONTROLS

- ▶ Install toe boards or mesh panels on all sides.
- ▶ Prohibit standing or working beneath mobile platforms.
- ▶ Secure tools in self-closing tool bags or bins when moving the platform.
- ▶ Conduct pre-use inspections for stability and proper guardrails.





# EXCLUSION ZONES UNDER EWPS (ELEVATED WORK PLATFORM) AND MOBILE WORK

Exclusion zones are essential  
secondary controls

- ▶ to protect workers from falling tools, materials, or debris under elevated work.
- ▶ Manage residual risks even when tool lanyards and barriers are in place.



# SETTING UP EFFECTIVE EXCLUSION ZONES

- 1.** Identify risk areas: directly below or near EWP's, lifting zones, or overhead work.
- 2.** Define and mark zones clearly with barriers, cones, or signage ("No Entry – Overhead Work in Progress").
- 3.** Control access – allow only essential personnel and use spotters when necessary.
- 4.** Size and shape – extend at least 1.5x the height of the work in all directions; adjust for boom reach.
- 5.** Communicate boundaries in toolbox talks and job briefings.
- 6.** Document exclusion zones in the JSA and inspect regularly.



# ENGINEERING CONTROLS

## **Tool tethering systems**

- ▶ Use lanyards, holsters, and tool belts to secure hand tools when working at height.

## **Fixed barriers and toe boards**

- ▶ Install toe boards, guardrails, and mesh barriers on elevated platforms to prevent items from sliding or falling off edges.

## **Netting and catch systems**

- ▶ Deploy safety nets or debris containment systems below work areas to catch falling objects before they reach ground level.

## **Secure storage solutions**

- ▶ Use enclosed containers, tool chests, or racks with locking mechanisms to store equipment safely at height.

## **Redesign of equipment and workspaces**

- ▶ Modify equipment to eliminate loose components (e.g., replacing riveted nameplates with etched ones) and redesign workflows to minimize overhead work.

## **Anchoring and clamping systems**

- ▶ Secure heavy equipment and components with clamps, brackets, or anchoring systems to prevent movement or dislodgement.

## **Lighting and visibility enhancements**

- ▶ Install adequate lighting to help workers identify and avoid potential hazards, especially in low-visibility areas.

## **Dropped object barriers on scaffolding and lifts**

- ▶ Use containment sheeting or edge protection systems on scaffolding and mobile elevated work platforms.

# PROCEDURAL CONTROLS

- ▶ Pre-task risk assessments and toolbox talks on dropped objects
- ▶ Permit-to-work systems for overhead lifting/scaffolding
- ▶ Spotters to enforce exclusion zones during crane/hoist work
- ▶ Sequence work to reduce overlap of trades in the same vertical space



# SITE-SPECIFIC RISK FACTORS

- ▶ Work at height (scaffolding, ladders, towers, cranes)
- ▶ Open edges and multi-level platforms
- ▶ High winds and weather conditions that can dislodge materials
- ▶ Temporary structures (formwork, scaffolds, lifts)
- ▶ Appropriate PPE



# Best Practices & Additional Measures

- ▶ Conduct regular dropped object risk assessments.
- ▶ Use checklists before and after working at height.
- ▶ Ensure workers are trained on dropped object hazards.
- ▶ Inspect lanyards, bags, and storage bins regularly.
- ▶ Communicate exclusion zones clearly with signage and barriers.
- ▶ Report and investigate all dropped object incidents.





# EMERGENCY RESPONSE

- ▶ Clear response protocols for dropped object incidents
- ▶ Reporting and investigation procedures
- ▶ First aid readiness near high-risk zones



# CONCLUSION

**Dropped objects are preventable with the right controls in place:**

- ▶ Use primary controls to secure tools and equipment.
- ▶ Apply secondary controls, including exclusion zones, to protect people and property.
- ▶ Promote a culture of awareness, training, and accountability.





