



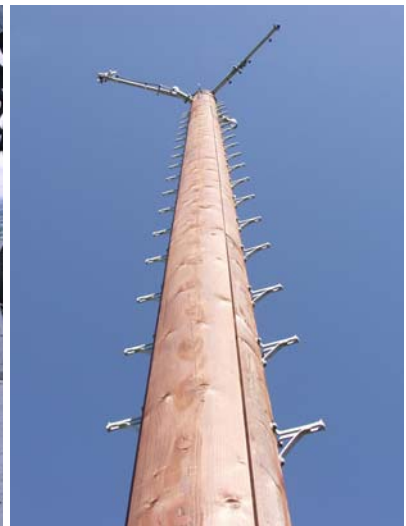
**Mast and Tower Safety Group**

*promoting safety and best practice*

**Guidance Note**

**GN-013**

# Drop Zones



# MATS Group Guidance Note

## Drop Zones

### 1. Purpose and Scope

This document aims to provide guidance on defining and establishing drop zones. A 'drop-zone' is an area at ground level in which it is foreseeable that items would land if they were dropped or if they were to fall from a structure.

All reasonable precautions should be taken to prevent objects falling from height e.g.

- Never throwing objects from height
- Only using lifting equipment that is suitable for the task being undertaken
- Knowing the weight of any object to be lifted
- Having clear and concise communications plans in place
- Avoiding inadvertent contact with any existing equipment on the structure
- Using a 'back-up' or 'safety-sling' where slings supporting the load could be compromised, e.g. sling supporting stay being struck by lightning
- Tethering hand-tools where there is a significant risk of a falling tool hitting a person or where the falling tool is of such a shape/weight that it is likely that it would cause a major injury to a person if it hit them.

Whilst the above measures will reduce the likelihood of falling objects, they are still a possibility. Therefore, 'drop-zones' should be imposed around the work at height area. For works on masts and towers, a 'high-risk' and 'medium-risk' drop-zone should be established. The 'high-risk' drop-zone is the area in which, there is evidence to suggest, the majority of falling objects from masts and towers land and the 'medium-risk' drop-zone is the area in which objects could foreseeably land under certain conditions.

### 2. Size of Drop-Zones

For work on tall masts (40m +) the 'high-risk' drop-zone should be a minimum 20m radius from the centre of the structure, with the 'medium risk' drop-zone extending to a minimum 50m radius.

For work on tall towers (40m +) the 'high-risk' drop-zone should be the area within the plan of the tower, plus a minimum 10m out from each face, with the 'medium-risk' zone extending to a minimum 20m out from each face.

For work on smaller infrastructure (< 40m) such as telecom towers and monopoles, the 'high-risk' drop-zone should be a minimum 10m radius from the centre of the structure, with the 'medium-risk' zone extending to a minimum 20m radius.

The above guidance assumes work at height is carried out at maximum height on the structures. A site specific risk assessment should be carried out prior to work which may identify that the risks can be adequately controlled with smaller drop-zones e.g. where work is taking place only at lower levels of the structure.

### 3. Control Measures

#### 3.1 High-risk drop-zone controls:

- Work within the zone should be minimised as far as possible
- When work at height is taking place access should be restricted to those personnel who are actively involved with the work at height activities
- Persons entering the zone should be authorised by the person on site in charge of the work at height

- Site offices, welfare cabins, delivery and vehicle-parking areas etc, should not be situated within the zone
- Hardhats should be worn at all times
- Access to areas within buildings that extend into the zone should be prevented unless it can be demonstrated that the building fabric is substantial enough to withstand the impact of likely falling objects.

### 3.2 'Medium-risk' drop-zone controls:

- Hardhats should be worn at all times
- Members of the public should not be permitted to enter the zone (where farmers etc have rights over adjoining land, arrangements should be made to co-ordinate work and avoid conflict)
- Where there are roads and footpaths within the zone, the appropriate authority should be contacted in order to obtain closures or diversions. Where this is not possible, other controls should be implemented e.g.
  - Implementing extra control measures to prevent falling objects
  - Placing of ground sentries to warn public of risks and to stop work at height where necessary
  - Carrying out lifting etc on the opposite side of the structure to the road or footpath
  - People who need to move through the drop-zone to enter a separate area of the site should do so safely e.g. whilst wearing a hardhat or whilst protected by a robust roof (including that of a vehicle).

Generally it should be possible to access and carry out works at ground level within a 'medium-risk' drop-zone as long as hardhats are worn. If the person in charge of the work at height feels that this is not safe, the 'high-risk' drop-zone should be redefined/extended to cover the area of concern.

## 4. Defining the Drop-Zones

Both 'high-risk' and 'medium risk' drop-zones should be defined. Signage warning of the overhead danger and designating the drop-zone a hard-hat area should be prominently displayed around the perimeter of both drop-zones and also:

- At any gate or entrance that leads into the drop-zone.
- On the inside of all doors that are used to exit buildings that are located within the drop-zone.
- Where any public footpath/access track intersects the perimeter of the drop-zone.

The person in charge of the work at height taking place should ensure that all workers, visitors and third parties who enter site are made aware of the two drop-zones and the control measures associated with each.

On most tall mast and tower sites, it will be possible to prevent members of the public from entering the high-risk drop-zone through use of the existing compound fence and control of the gate. For sites that are not secured by suitable fencing and where there is a significant likelihood that members of the public will inadvertently enter, the 'high-risk' drop-zone should be physically demarcated, by temporary fencing, cones, bunting or barriers. Natural barriers such as well-established hedgerows may be an acceptable form of barrier but should be supplemented with the necessary signage.

It is accepted that low weight, large surface area items, e.g. antenna panels, may land well outside both 'high-risk' and 'medium risk drop-zones' if they were to fall. It is not reasonably practicable to impose drop-zones to contain such items and therefore additional control measures should be applied to prevent such items from falling.

## 5. Drop-Zones During Lifting Activities

'High-risk' drop-zones should be extended during lifting activities to include the 'lifting-lanes' (for both man-carrying lifting apparatus and materials lifting). A 'high-risk' drop-zone 20m wide should be established for the length of the lifting lane and should be adequately signed and controlled.

Drop-zones for helicopter lift activities will be defined and controlled in accordance with specific risk assessments.

A risk assessment should be carried out to identify the extent of the control measures required using the above guidance for reference. The assessment should take into account, number of persons at risk, danger to members of the public, whether lifting is taking place etc. Signage such as that below should be used to warn of work at height.



## 6. Related documents

- MATS Group Guidance Note GN-001 – Work at Height Training
- MATS Group Guidance Note GN-010 – Working at Height in Darkness

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*The information in this document does not absolve contract ors or suppliers from their responsibility to identify and comply with all relevant legislation, regulations and legal standards nor does it take precedence over laws, regulations and external standards*