



**Guidance on  
Safe Use of  
Mobile Access  
Towers**



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A photograph showing construction workers on mobile access towers (scaffolding) at a building site. The workers are wearing high-visibility vests and are positioned on different levels of the towers. The background shows a building with corrugated metal siding. The image is overlaid with a blue tint and a white torn-edge effect at the bottom.

# Guidance on Safe Use of Mobile Access Towers

A large orange graphic area at the bottom of the page, featuring a white geometric pattern of interconnected lines and shapes, resembling a network or circuit board. The year '2023' is printed in large, bold, yellow font across the center of this area.

2023



## Preface



Falls from height continue to be the dominant cause of serious and fatal injuries in the construction industry. The importance of proper planning, erection, and use mobile access towers cannot be understated in reducing the risk of injury.

This guidance provides up-to-date recommendations to sub-section 5.5 of the Guidelines for the Prevention of Falls at Workplaces 2007. It helps the industry to manage safety risk effectively when using mobile access towers and can be used as a reference for training on safe use of mobile access towers.



## Acknowledgments

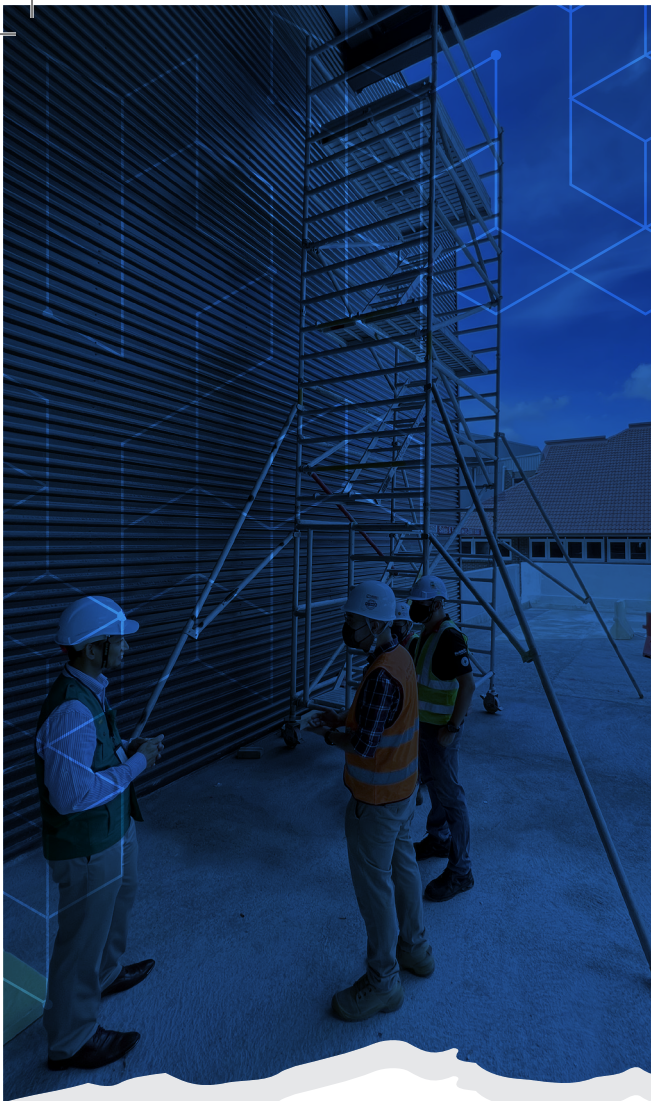
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## Introduction

1 Mobile access towers (also known as mobile scaffolds) provide a practical and safe means of access to work at a height if they are properly erected and used by trained persons. Mobile access towers utilise prefabricated components which are assembled in a modular fashion to achieve the required height following the manufacturer's instruction manual.

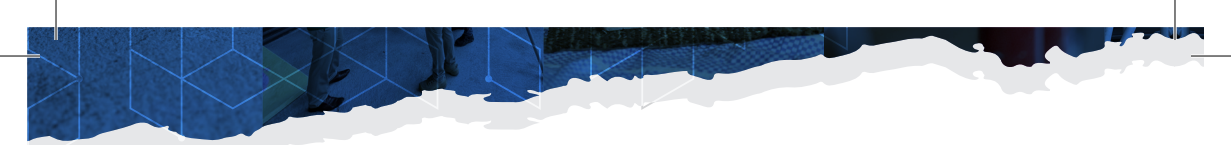
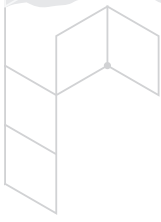
2 This guidance covers mobile access towers under EN 1004-1 *Mobile access and working towers made of prefabricated elements: Materials, dimensions, design loads, safety and performance requirements*.

3 There are mobile access towers which utilise components from EN 1004-1 systems but are outside the scope of EN 1004-1. These mobile access towers fall under the scope of BS 1139-6<sup>1</sup> and are not covered within this guidance.

4 Mobile access towers rely on all parts being in place to ensure adequate strength and stability. They can collapse or overturn if they are built incorrectly or some parts are missing. Mobile access towers are scaffold structures which:

- a. are used free-standing;

<sup>1</sup> BS 1139-6 *Metal Scaffolding Prefabricated Tower Scaffolds Outside the Scope of BS EN 1004-1, but Utilizing Components from such Systems. Specification*


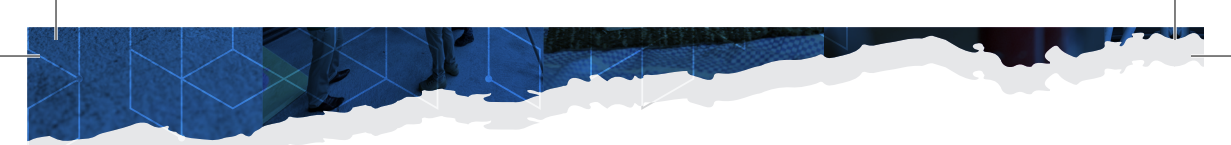
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- 
- b. have one working platform;
  - c. are erected using prefabricated components;
  - d. have the dimensions fixed by the design;
  - e. have four legs with four castors;
  - f. are stable, by supports on the ground and if necessary by support to a vertical construction by wall strut.

5 Before selecting or specifying a mobile access tower, the employer must satisfy himself that it is the most suitable work equipment for the job. Employer should refer to the manufacturer's instruction manual. Mobile access towers are more likely to be suitable for work either at a single location or at a series of locations at the same height, for example cleaning same-floor windows or maintenance of light fittings.



Figure 1. Mobile access towers are suitable for work at a series of locations at the same height, for example cleaning first-floor windows. (Image credit: Hire Desk)

6 The Occupational Safety and Health Act 1994 (OSHA) requires the manufacturer or supplier to provide information and instruction that explains the erection sequence, including any bracing requirements and the height to which the mobile access towers can be erected safely.



7 In line with the OSHA, the EN 1004-1 requires that all manufacturers produce an instruction to accompany a mobile access tower as per EN 1004-2 *Mobile access and working towers made of prefabricated elements: Rules and guidelines for the preparation of an instruction manual*. This manufacturer's instruction manual shall be passed on to the trained persons who erect and use the mobile access tower.



8 This guidance is limited to the design of mobile access towers made of prefabricated elements with a height up to 12 meters indoors and 8 meters outdoors. Beyond these heights, tower scaffolds should be used in accordance with BS 1139-6.

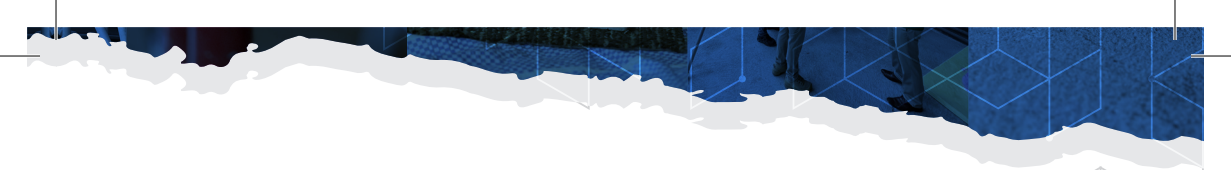
9 The height of the mobile access tower is measured vertically from the ground to the upper surface of the top platform. Note that an “indoor” means that the mobile access tower is not exposed to wind, and “outdoor” means that the mobile access tower may be exposed to wind.



## Ground surface

10 Mobile access towers should be erected and used on firm surface that is suitable for the type of mobile access tower. The surface should be solid (hard) and level. Obstructions and holes such as ducts, pits or gratings should be securely fenced or covered.






11 Where the surface is inclined the manufacturer's instruction manual should state the maximum incline the mobile access tower can be used at.



## Stability

12 Mobile access towers, designed and tested to EN 1004-1, are stable during erection, use, moving and dismantling. When in use, mobile access towers are subjected to vertical loads (such as the working tower service load) and horizontal loads (such as working loads and wind loads).

13 The manufacturer's instruction manual should state the maximum vertical and horizontal loads that can be applied to the mobile access tower. The manufacturer's instruction manual should also state the maximum wind loads the mobile access tower can be safely used at, and at what expected wind speed the mobile access tower should be dismantled.



14 If users exceed the maximum working loads (vertical or horizontal) then mobile access tower may become unstable and collapse or overturn.

15 Users and managers of mobile access towers shall ensure that maximum working loads stated in the manufacturer's instruction manual are not exceeded during erection, use, moving and dismantling.

## Mobile access tower use

- 16 When erecting mobile access towers:
- follow the manufacturer's instruction manual;
  - do not exceed the maximum height as in the manufacturer's instruction manual;
  - do not use the working platform as a support for ladders, trestles or other access equipment;
  - do not overload the working platform;
  - do not climb up the outside of the mobile access tower and only climb using the access system provided; and
  - be aware of overhead obstructions and electrical hazards.
- 17 During usage, forces capable of overturning a mobile access tower should not be applied. Limits will be stated in the manufacturer's instruction manual. In use, such forces may arise from pushing the mobile access tower, lifting loads up the outside of the mobile access tower, carrying out grit blasting or water jetting, hauling heavy ropes or cables or using mobile access towers to support rubbish chute. Using hand tools such as drills can cause an additional horizontal load on the mobile access tower.



Figure 2. Do not use working platform as a support for ladder.

- 18 When moving a mobile access tower:
- check that the maximum height is within the manufacturer's instruction manual;
  - check that there are no power lines or overhead obstructions in the way;
  - check that the ground is firm, level and free from obstructions and holes;

- d. never move it while there are people or materials anywhere on the mobile access tower;
- e. move it manually, pushing the mobile access towers at or near the base – mechanical means should not be used to push mobile access towers.

19 After erection, mobile access towers must be inspected by a trained person and an inspection tag should be placed on the mobile access towers (see Figure 3) confirming it is ready for use or that it is incomplete and must not be used. Tags can be written or digital and must be updated when the mobile access tower is re-inspected.




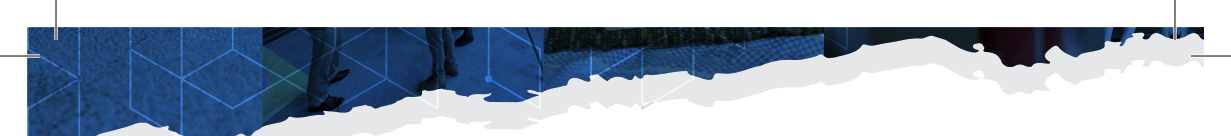
Figure 3. Example of inspections tag to be placed on mobile access towers. (Image credit: PASMA)

20 When mobile access towers are used in public places, extra precautions should be in place, such as:

- a. erect barriers at ground level to prevent people from walking into the mobile access tower or work area (see Figure 4);
- b. minimise the storage of materials and equipment on the working platform;
- c. remove ladders or install ladder guard to prevent unauthorised access if they are to remain in position unattended.




Figure 4. Erect barriers at ground level to prevent people from walking into the mobile access tower or work area. (Image credit: PASMA)




21 A new inspection and report is not required every time a mobile access tower is moved to a new location. However, it is good practice to do so, and it can be done by the user.

22 If components have to be removed to enable the mobile access tower to be moved, then a new inspection should be conducted to ensure the mobile access tower has been reinstated correctly. In this situation, the use of a visible tag system (which can be updated each time a check is carried out) to supplement inspection records is one way of recording that the inspection has been undertaken. These can be done by trained persons who have attended training on this guidance and manufacturer`s instruction manual, for example PASMA Towers for Users.




## Working platform

23 Mobile access towers have platform units that are **0.6 meter** wide and at least **1 meter** long. These are made as either fixed platforms or trap door platforms, with openings to allow access. Platform units have a slip-resistant surface and catches at both ends to prevent uplift by wind. Any trap door opening must be closed and secured to prevent users falling through.




24 Working platforms consist of one or two platform units with side protection on all sides. Side protection consists of 3 parts: an upper guard rail, a middle guard rail





and a toe board.


25 The upper guard rail is a minimum of **0.95 meter** above the platform. There should be no gap greater than **0.47 meter** between either guard rails and toe boards. The toe board is a minimum of **0.15 meter**.

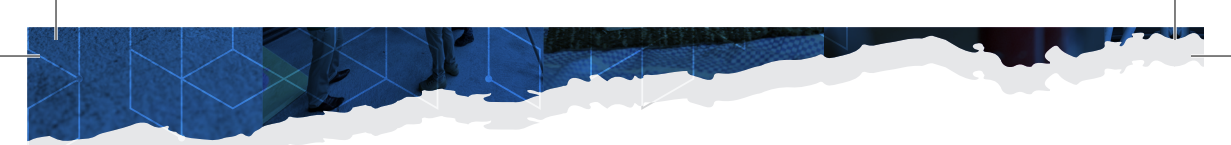


## Inspection and reporting

26 Mobile access towers must be inspected by a trained person. On completion of an inspection, a report (with contents as suggested in paragraph 34) to that effect should be prepared by the trained person. The report may in the form of a tag which is attached to the tower.

27 The timing of such inspection should be:

- a. after erection and before use in any position;
  - b. after any event likely to have affected its stability, for example following strong winds or substantial alteration; and
  - c. at regular intervals if the working platform of the mobile access towers is below **2.0 meters** in height (as specified in manufacturer's instruction manual) or at intervals not exceeding **seven days** if the working platform is at **2.0 meters** or above in height. Note: Height refers to the maximum possible height of the working platform in mobile access towers.
- 



28 The person in control of the mobile access tower must ensure that the inspection is carried out by a trained person, who has appropriate training (for example attendance at a PASMA Towers for Users or Towers for Managers course) and experience to enable them to identify any risks that are present and decide upon the measures required to control the risks.

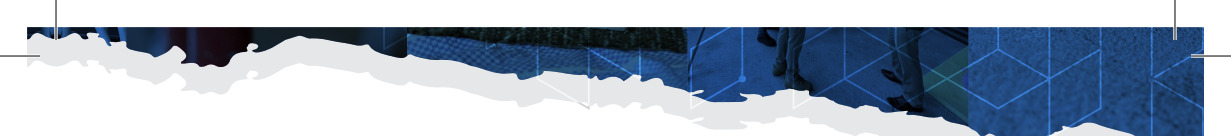
29 The person in control of the activities of users who use mobile access tower also need to ensure it is safe before they use it for the first time.


30 If the trained person is not satisfied that work can be carried out safely, he should advise the person whom the inspection was carried out for (for example a site manager of the main contractor) as soon as possible. A “Stop Work” should be issued if the inspection shows it is not safe to continue.

31 The result of an inspection should be recorded and kept until the next inspection is recorded.

32 However, if the working platform is **2.0 meters** or above in height and the inspection is carried out after erection, installation or following an event that may have affected the towers safety, to comply with the **seven-day** inspection regime, the trained person should:

- 33 The person receiving the report should:
- a. complete the inspection report before the end of the working period;
  - b. provide a copy of the report to the person whom the inspection was carried out for within **24 hours**.

- 
- 34 The report should contain the following information:
- a. keep it at the site where the inspection was carried out until construction work is completed;
  - b. thereafter, keep it at their office for **three months**.
- 35 Appendix 1 contains a suggested format that may be
- a. name and address of the person whom the inspection was carried out for;
  - b. location of the mobile access towers inspected;
  - c. description of the mobile access towers inspected;
  - d. date and time of the inspection;
  - e. details of any matter identified that could give rise to a risk to the safety or health of any person;
  - f. details of any action taken as a result of any matter identified in the point (e);
  - g. details of any further action considered necessary;
  - h. name and position of the trained person who prepares the report.



reproduced or copied for recording this information. The suggested form does not have to be used. An electronic (digital) version should be more robust and easier to store – any format containing the required information is acceptable. An example to this can be accessed from TowerSure at <https://pasma.co.uk/scaffold-towers/towersure/>

## Mobile access tower types and access

36 The working platform has a safe means of access, always on the shorter side of rectangular mobile access towers. Access is provided to the working platform using stairways (type A), stair ladders (type B), inclined ladders (type C), or vertical or integral ladders (type D), or erected in accordance with the manufacturer's instruction manual. Always climb the tower using the built-in access and always climb on the inside. Never climb the outside of the tower as it can overturn. No other method of access should be used, for example, never lean a ladder against the mobile access tower.

37 Types of mobile access towers and access are shown in Figure 5.

38 Access to the platforms in an erected mobile access tower should be within the main structural supports and should:

- a. be secured against unintentional loosening;
- b. not rest on the ground;
- c. have a distance from the ground to the first step or rung of **400 millimeters** maximum (if the first step is a platform, **600 millimeters** is allowable);
- d. have steps/rungs with constant spacing and a slip resistant surface.



Type A  
Stairway Tower



Type B  
Stairladder Tower



Type C  
Inclined Ladder Tower



Frame  
Access



Vertical  
Ladder



Frame  
Access

Type D  
Vertical Ladder

Figure 5. Mobile access tower types – PASMA Code of Practice.  
(Image credit: PASMA)

## Manufacturer's instruction manual

39 The manufacturers and suppliers of mobile access towers shall provide an instruction manual that comply with EN 1004-2 Mobile access and working towers – Rules and guidelines for the preparation of an instruction manual. This instruction manual should be available to people erecting, using and inspecting the mobile access tower. The correct manufacturer's instruction manual shall be followed.

## Instruction, training, and supervision

40 Mobile access towers shall be erected and inspected by trained person who has sufficient skills and training and is following a safe method of work. The trained person who erect and inspect shall be provided with adequate and comprehensible instructions both for the erection and checking of the mobile access towers.

41 Trained person who erect mobile access towers should have been trained to a PASMA Tower for User level and follow the manufacturer's instruction manual. Supervisors should be trained to a PASMA Tower for Managers level and appointed to ensure that mobile access towers are safely planned, erected, checked and used.



## Castors


42 Mobile access towers should have their castors turned outwards to provide maximum base dimensions. The brakes should always be locked when the mobile access tower is in use, except when moving the mobile access tower. The brake should be prevented from accidentally release when locked.

43 Castors should be fitted with adequate brakes and they should be securely fixed to the base of each standard to prevent accidental uncoupling. In a case where the castors or standard legs are adjustable this is only generally for levelling purposes and should not be used as a means of increasing the working platform height.

44 Castors should not be less than **125 millimeters** in diameter and of punctureless type. The maximum permitted load should be stamped on the castors.



## Falls from a height – during erecting and dismantling



45 There are currently two methods of providing a safer environment during erecting and dismantling of mobile access towers. These methods take account of the need to prevent falls during these processes.

46 Method 1: Advance Guardrails - This method requires the erector to install specially designed temporary guard rail frames ahead of the platform from the safety of the

level below so that collective fall prevention measures are in place before the erector stands on the platform (see Figure 6). The progressive erection of guard rails from a protected area at a lower level ensures the scaffolder is never exposed to the risk of falling from an unguarded platform.



Figure 6. Advance Guardrail Pasma. (Image credit: Pasma)

47 Method 2: Through-the-Trapdoor (3T) - This method allows the erector to take up a position of minimum risk during the installation of guard rails to the next level. The erector takes up a working position in the trapdoor of the platform, from where he can add or remove components that act as the guard rails on the level above the platform.

48 It is designed to ensure that the erector does not stand on an unguarded platform but installs or removes the guardrail components to a particular level while positioned within the trapdoor of that same level. The 3T method makes use of standard mobile access tower components (see Figure 7).

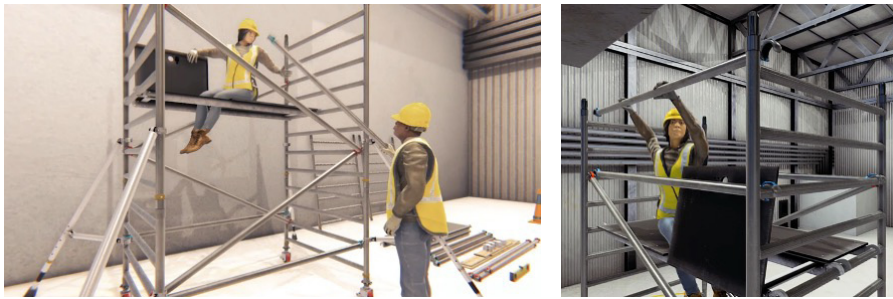


Figure 7. Through the trap PASMA. (Image credit: PASMA)

## Falls from a height – personal fall protection equipment

49 It is not recommended for worker to attach safety harness lanyards to mobile access tower. In the event of an arrested fall, worker is likely to cause the mobile access tower to overturn or collapse, not only increasing the risk of further injury to that worker, but also endangering others in the vicinity from the falling mobile access tower.




## Overhead electricity lines

50 Mobile access towers should not be used in locations adjacent to overhead electricity lines. Where mobile access towers are being used in the same general area as overhead electricity lines, physical barriers and warning notices should be provided to prevent people coming close to them. The employer shall carry out risk assessment and consult the relevant authority.



## References

1. Guidelines for the Prevention of Falls at Workplaces, Department of Occupational Safety and Health, Malaysia, 2007.
  2. Operators Code of Practice, Prefabricated Access Suppliers' and Manufacturers' Association (PASMA), UK.
  3. EN 1004-1 Mobile access and working towers made of prefabricated elements - Part 1: Materials, dimensions, design loads, safety and performance requirements
  4. EN 1004-2 Mobile access and working towers made of prefabricated elements - Part 2: Rules and guidelines for the preparation of an instruction manual
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Appendix 1: Example of an Inspection report.

<b>INSPECTION REPORT</b>		
1. Name and address of person for whom inspection was carried out		
2. Site address	3. Date and time of inspection	
4. Location and description of mobile access tower inspected		
5. Matters which give rise to any safety and health risks		
6. Can work be carried out safely?	Y/N	
7. If not, name of person informed		
8. Details of any other action taken as a result of matters identified in 5 above		

9. Details of any further action considered necessary

10. Name and position of person making the report

11. Date and time report handed over

12. Name and position of person receiving report

**Notes:**

1. 'Installation' means putting into position and 'erection' means putting together. You are not required to inspect and provide a report every time a ladder or mobile access tower is moved on-site or a personal fall protection system is clipped to a new location.
2. An inspection and a report is required for mobile access towers (used for construction work and from which a person could fall 2 metres) after erection or installation and every seven days thereafter, providing the equipment is being used on the same site. A record of this inspection shall be made and retained for three months. If a mobile access tower is re-erected rather than simply moved, then an additional, pre-use inspection and report is required. It is acceptable for this inspection to be carried out by the person responsible for erecting the mobile access towers, providing they are trained (refer paragraph 41).
3. A visible tag system (see paragraph 19), which supplements inspection records as it is updated following each pre-use inspection, is a way of recording and keeping the results until the next inspection.