



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會



GUIDELINES ON WORK-ABOVE-GROUND SAFETY



Disclaimer

Whilst reasonable efforts have been made to ensure the accuracy of the information contained in this publication, the CIC nevertheless would encourage readers to seek appropriate independent advice from their professional advisers where possible and readers should not treat or rely on this publication as a substitute for such professional advice for taking any relevant actions.

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Preface

The Construction Industry Council (CIC) is committed to seeking continuous improvement in all aspects of the construction industry in Hong Kong. To achieve this aim, the CIC forms Committees, Task Forces and other forums to review specific areas of work with the intention of producing Alerts, Reference Materials, Guidelines and Codes of Conduct to assist participants in the industry to strive for excellence.

The CIC appreciates that some improvements and practices can be implemented immediately whilst others may take more time to adjust. It is for this reason that four separate categories of publication have been adopted, the purposes of which are as follows:

Alerts Reminders in the form of brief leaflets produced quickly to draw the immediate attention of relevant stakeholders the need to follow some good practices or to implement some preventative measures in relation to the construction industry.

Reference Materials Reference Materials for adopting standards or methodologies in such ways that are generally regarded by the industry as good practices. The CIC recommends the adoption of these Reference Materials by industry stakeholders where appropriate.

Guidelines The CIC expects all industry participants to adopt the recommendations set out in such Guidelines and to adhere to such standards or procedures therein at all times. Industry participants are expected to be able to justify any course of action that deviates from those recommendations.

Codes of Conduct Under the Construction Industry Council Ordinance (Cap 587), the CIC is tasked to formulate codes of conduct and enforce such codes. The Codes of Conduct issued by the CIC set out the principles that all relevant industry participants should follow. The CIC may take necessary actions to ensure the compliance with the Codes.

If you have attempted to follow this publication, we do encourage you to share your feedback with us. Please take a moment to fill out the Feedback Form attached to this publication in order that we can further enhance it for the benefit of all concerned. With our joint efforts, we believe our construction industry will develop further and will continue to prosper for years to come.

1. Introduction

- 1.1 Unsafe work-above-ground (i.e. any work not carried out on or from the ground or from part of a permanent structure) has been one of the major causes of fall from height accidents, resulting in serious injuries or even fatalities. Most of these accidents, however, could have been prevented if suitable working platforms had been provided and properly used. In some serious and fatality cases, control, if any, on use of ladders had been very slack, and conduct of risk assessments and formulation of method statements with due consideration of task-specific factors such as job locations and work nature, etc. had not been done.
- 1.2 For any work-above-ground, suitable working platforms should be the primary means of support to be considered for use. For work-above-ground below 2m where working platforms could not be erected under special working conditions (e.g. restrictive workplace), suitable light-duty working platforms should be used. Unless in very exceptional circumstances that working platforms or light-duty working platforms are impracticable to be used, use of ladders for work-above-ground should be prohibited. Under such exceptional circumstances where ladders have to be used, task-specific risk assessment should be conducted and safe system of work, such as a permit-to-work system, should be formulated and implemented beforehand. Ladders should not be used for any work-above-ground at 2m or more.
- 1.3 This publication makes reference to the core elements of a safe system of work and safety management system, and recommends necessary precautionary measures to enhance safety on work-above-ground, including task-specific risk assessments, appropriate method statements, use of suitable working platforms or other safe means of support and stringent control on use of ladders.

2. Limitations

- 2.1 It is important to note that compliance with this publication does not itself confer immunity from legal obligations in Hong Kong. Employers and contractors are reminded to observe and comply with statutory provisions, relevant codes of practice and other government departments' requirements so as to discharge their legal and other pertinent duties related to work-above-ground.

3. Risk Assessment

- 3.1 As regards work-above-ground, employers and contractors should conduct task-specific risk assessments and thereby formulate safe work methods and implement safety precautions and procedures as appropriate to prevent and eliminate work-related hazards before commencing work. In the first place, work-above-ground should be avoided as far as possible, for instance, by designing and using specific hand tools to allow the work to be done on the ground (e.g. using a long reach pole).
- 3.2 If there is genuine need to work above ground, employers and contractors should consider all relevant factors including the work nature, appliances and materials to be used, working height and working environment, etc. in formulating and implementing effective safety measures.

4. Safe Use of Working Platforms

- 4.1 Whenever work-above-ground could not be avoided after conducting risk assessments, suitable working platforms (e.g. mobile working platforms) should be provided and used irrespective of the working height.
- 4.2 Working platforms should be suitably designed and constructed. All components of the working platforms should be made of suitable and sound materials of sufficient strength and capacity for the purpose for which they are used, and free from patent defect.
- 4.3 Working platforms should be erected on firm, even and level ground. The surrounding of working platforms should be kept free from waste and miscellaneous materials.
- 4.4 Erection and use of working platforms on ramps, stairs, unstable or uneven floor surface without suitable authentic accessories from the manufacturer to enhance the stability of the working platforms or in locations where the working platforms may be hit or struck by moving objects should be prohibited.
- 4.5 The surrounding of the working platforms should be free from exposed live metal parts or potentially exposed live conductors to prevent electrical hazard.
- 4.6 Working platforms should be provided with suitable access and egress (e.g. straight or inclined ladders with suitable hand grips). When ascending/ descending the working platforms, the workers should maintain 3 points of contact with the platforms (i.e. both hands gripping with one leg stepping at the same time or both legs stepping with one single hand gripping). Workers should keep the centre of gravity of their bodies within the working platforms and should not overload them. Workers should beware of overhead room and check for any obstruction to prevent accidental hit on the head before and during the use of working platforms. Every worker should wear a safety helmet with a chin strap.



Ascending/descending the mobile working platform from the inside of a mobile working platform.



Workers should beware of overhead room and check for any obstruction to prevent accidental hit on the head before and during the use of working platforms. Safety helmets with chin straps should be used.

- 4.7 The safe height-to-base ratio and other safety recommendations in the instruction manual should be strictly followed - never deliberately increase the height of mobile working platforms beyond that recommended by the manufacturer. If required, the outriggers of the platform should be fully extended as per manufacturer's requirement to ensure its secure foundation and stability.
- 4.8 During use, the workers should not overstretch the bodies outside the working platforms. Take note of the safe loading capacity as stated by the manufacturer and never place excessive materials on the working platforms to avoid overloading and damaging the working platforms. All guard-rails and toe-boards provided on the working platforms should be kept erected, except for the time and to the extent necessary for the access of persons or the movement of materials but should be replaced or erected as soon as practicable afterwards. Stepping on the toe-boards or guard-rails of working platforms (either intermediate guard-rails or top guard-rails) is strictly prohibited.



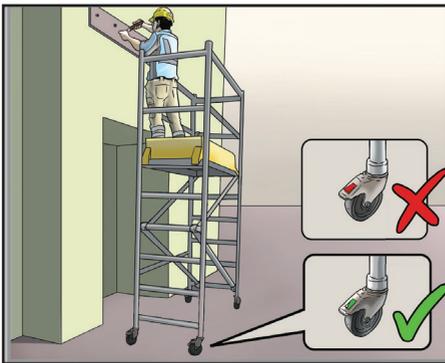
Do not overstretch the body outside the working platform.



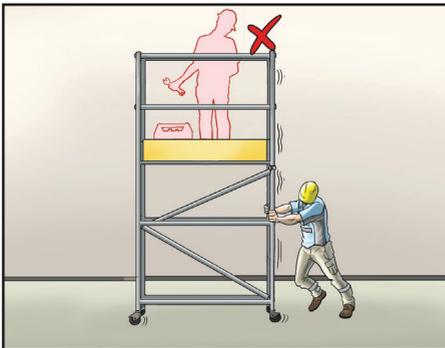
Do not lean on the guard-rail of the working platform.

- 4.9 Be aware of weather conditions if the working platforms are to be used outdoors. Never cover the working platforms with canvas to prevent overturning due to windy weather. Where reasonably practicable, working platforms should be braced or tied into a permanent structure to enhance their stability. In case of typhoon and inclement weather, stop using the working platforms immediately and properly secure the platforms to prevent toppling in wind or dismantle it and keep it in a safe place.
- 4.10 All the castors of a mobile working platform should be firmly locked in position while ascending/descending and using the platform.

- 4.11 When a mobile working platform is being moved to another work location, do not allow any persons to stay or any object that may increase risk of toppling of the platform or loose objects (e.g. hand tools) that may fall during movement of platform to be placed thereon. Also, moving the platform on rough and uneven surfaces should be avoided as it may make the platform collapse or overturn.
- 4.12 Stop using the working platforms immediately when they are found damaged and label them with suitable signs and warning notices.
- 4.13 After use, the working platforms should be properly stored and maintained.



Ensure that all the castors are firmly locked in position while ascending/ descending and using a mobile working platform.



When moving the mobile working platform, no person should be allowed to stand and no object should be placed on the mobile working platform.

5. Safe Use of Light-duty Working Platforms

- 5.1 For work-above-ground below 2m where working platforms could not be erected under special working conditions (e.g. restrictive work space) and the work concerned is of simple nature, use of suitable light-duty working platforms such as step platforms or hop-up platforms should be considered. When light-duty working platforms are used, the following specific safety measures should be followed.



Step platform deployed for checking the ventilation system in a room where there is restricted space to accommodate a typical working platform.

- 5.2 It should be borne in mind that only one person is permitted to work on each light-duty working platform at one time.
- 5.3 Workers using light-duty working platforms should have received relevant safety training provided by the supplier, including erection and dismantling of the working platforms, or other equivalent training such that they clearly understand the safety instruction or manual of the manufacturer.
- 5.4 Before use, inspection (including visual check) of the light-duty working platform should be conducted according to the safety checklist provided by the supplier or other equivalent safety checklist to ensure that the working platforms are in good condition and free from damage. Besides, the stabilisers or outriggers of the light-duty working platforms should be fully extended and locked in position in accordance with the manufacturer's manual to ensure their stability before stepping on the platforms.



Before use, inspection (including visual check) of the light-duty working platforms according to the safety checklist provided by the supplier or other equivalent safety checklist should be conducted.

- 5.5 The workers should face the light-duty working platforms when ascending or descending the working platforms. Do not apply excessive force to the working platforms and induce lateral force rendering the overturning of the working platforms.



Worker should face the light-duty working platform when ascending or descending.



Do not apply excessive force to the working platform and induce lateral force rendering the overturning of the working platform.

6. Stringent Control on Use of Ladders

- 6.1 Ladders should normally be restricted for access/egress purpose only. Unless in very exceptional circumstances following a task-specific risk assessment, ladders should not be used for work-above-ground and in no cases should ladders be used for work at height of 2m or more. In particular, ladders should not be used for electrical work as far as practicable because even a mild electrical shock will likely cause loss of balance of the workers, resulting in fall from height.
- 6.2 If the use of ladders is unavoidable, it should be put under stringent control, such as through implementing a permit-to-work system, to ensure that adequate and suitable control and safety measures are put in place to safeguard the workers concerned. The permit-to-work for use of ladders should be issued by a competent person who is appointed by the proprietor/employer/contractor and by reason of substantial training and practical experience in relation to conducting risk assessment and issuance of permit-to-work, competent to conduct the duties, with a task-specific risk assessment conducted and all necessary safety measures related to use of ladders taken. While the implementation of a permit-to-work system is impracticable, pre-work check on use of ladder with the use of a checklist should be conducted. If ladders are unavoidably to be used for electrical work, the permit-to-work system or pre-work check should also cover other risk mitigation measures (e.g. the ladders to be used are made of non-conductive material) as appropriate.
- 6.3 The following are some guidance and key elements for a permit-to-work (in this case, a permit to work on use of ladder) system:

In preparation stage:

- the persons who may permit the work should be clearly designated and made known to the workers concerned;
- suitable training and instruction in the issue, use and closure of the permit should be provided to the relevant personnel;
- the work to be done, work location, start time and duration of the permit should be clearly described and stated on the permit;
- task-specific risk assessment to identify potential hazards at the job site should be conducted;
- the work location and the equipment to be used should be inspected; and
- the safety precautions required to minimise risks associated with carrying out the intended work should be carefully considered and properly documented.

During work stage:

- no work should be allowed without the issuance of the permit or upon the expiry of the permit;
- the permit to work as well as the required precautions should be properly implemented, monitored and controlled;
- handing over of responsibilities between shifts, if applicable, should be properly done and clearly described on the permit; and
- the permit should be properly displayed during the time at which the work-above-ground concerned is taking place.

Post work stage:

- suitable steps should be carried out for reinstating the site to its original state when the required task is completed to ensure that any residual risks are removed before the site is handed over; and
- the permit to work should be properly kept for a reasonable period of time for record and future reference purposes.

6.4 The permit to use a ladder for working above ground less than 2 metres should only be considered in case of restrictive workplace that makes the erection of any working platform not practicable. Annex A lists out the conditions that should be imposed in such a situation.

6.5 Samples of permit to work and checklist for the assessment on use of ladders are shown in Annexes B and C respectively.

7. Use of Personal Protective Equipment

7.1 The use of personal protective equipment (PPE) to prevent workers from falling from height should always be treated as the last resort. If this type of protective measures is needed on warranted occasions following a task-specific risk assessment, steps should be taken to ensure that suitable PPE coupled with appropriate anchorage system is provided, used and maintained, and the workers concerned use them properly.

8. Coordination and Communication

- 8.1 An effective coordination and communication system should be established and maintained among the employer/contractor, different levels of management/supervisory personnel and workers to ensure clear understanding of the potential hazards, the associated hazard control program and the delineation of safety responsibilities.
- 8.2 The main contractors and subcontractors should clearly delineate their roles and responsibilities in the provision and use of working platforms, and the restrictions on the use of ladders, such as through agreements or contracts.

9. Monitoring and Control

- 9.1 An effective monitoring and control system should be developed, implemented and maintained to ensure that the safe working procedures and safety measures for work-above-ground.
- 9.2 If any unsafe working conditions are found, the employer/contractors should suspend the work involved immediately. The work under suspension can only be resumed after all necessary improvement measures have been implemented effectively.

10. Safety Information, Instruction and Training

- 10.1 Workers and site supervisory staff should be provided with necessary safety information, instruction and training to ensure that they are all familiar with the potential hazard of fall-from-height, safe work method and safety measures for the work-above-ground.

Conditions should be imposed when ladders are to be used

- i) The design and build of the ladder should be suitable for the work. It should be provided with sufficient foothold and handhold along the climb and in the working position of the ladder;
- ii) The ladder should be of adequate strength and free from defect;
- iii) The ladder should be placed on a firm, even and level ground. It should be adequately secured and stabilized;
- iv) The use of ladder for strenuous or heavy work should be prohibited;
- v) The standing height and the time duration of the work on the ladder should be restricted;
- vi) Safe work procedures should be followed and suitable equipment/tool should be used;
- vii) Sufficient information, instruction and training in respect of working on ladders should be provided to all levels of site personnel, including the workers and the supervisors, so as to effectively communicate to them the hazards associated with the use of ladders and the conditions to be fulfilled under the permit-to-use system; and
- viii) An effective monitoring and control system should be established and put in place to ensure full implementation of the permit-to-use system.

Sample of Permit-to-work on use of ladder (for reference only)

****Ladder should NOT be used for work-above-ground unless in very exceptional circumstances**

All parts are to be completed by the competent person

Part I

Company name:		Contact no.:	
Name of competent person:		Post:	
Date:		Duration of work:	From____to____
Location of work:			
Description of work:			

Part II

Item	Descriptions	Yes	No
1.	A proper working platform or other suitable means of support can be used for the work.		
2.	The work is of short duration.		
3.	The work is simple in nature.		
4.	The work requires the use of heavy equipment/tool.		
5.	The design and build of the ladder are suitable for the work.		

***Ladder should not be used if the answer to any of the questions falls in a box shaded in grey**

Part III

Item	Descriptions	Yes	No
1.	The ground on which the ladder to be placed is firm, even and level.		
2.	The surrounding is free from the risk of being hit or struck by moving objects.		
3.	The surrounding is free from live metal part or live exposed conductor.		

4.	The headroom is high enough to prevent accidental hit on worker's head when standing on the ladder.		
5.	The ladder is secure, free from damage and defect.		
6.	The ladder is placed in a right position and no overreach of the body for the work is required.		
7.	The spreaders or similar restraint devices (but not nylon ropes) of the ladder are fully extended and securely fixed.		
8.	All ladder legs are fitted with slip-resistant feet, placed on the same plane and in good contact with the ground.		
9.	3 points of contact with the ladder could be maintained while climbing along or working on the ladder.		

Remarks:

Use of ladder is:

not allowed

allowed

Signature of competent person:

Name of competent person:

Post:

Date:

Part IV (for use after the work has been completed)

Item	Descriptions	Yes	No
1.	The site is reinstated to its original state.		
2.	All residual risks are removed.		
3.	The ladder is removed and locked.		

Signature of competent person:

Name of competent person:

Post:

Date:

Checklist on Use of Ladders

Ladders should be restricted for access/egress purpose only unless in very exceptional circumstances. In no cases should ladders be allowed to be used for work at height of 2m or more. In particular, ladders should not be used for electrical work as far as practicable.

Item	Descriptions	Yes	No
Part A	Ladder should not be used if the answer to any of the questions in Part A falls in a box shaded in grey.		
1.	A proper working platform or other suitable means of support can be used for the work.		
2.	The work is of short duration.		
3.	The work is simple in nature.		
4.	The work requires the use of heavy equipment/tool.		
5.	The design and build of the ladder are suitable for the work.		
	End of Part A		
Part B	The following conditions should be fulfilled before the ladder is to be used.		
1.	The ground on which the ladder to be placed is firm, even and level.		
2.	The surrounding is free from the risk of being hit or struck by moving objects.		
3.	The surrounding is free from live metal part or live exposed conductor.		
4.	The headroom is high enough to prevent accidental hit on worker's head when standing on the ladder.		
5.	The ladder is secure, free from damage and defect.		
6.	The ladder is placed in a right position and no overreach of the body for the work is required.		
7.	The spreaders or similar restraint devices (but not nylon ropes) of the ladder are fully extended and securely fixed.		
8.	All ladder legs are fitted with slip-resistant feet, placed on the same plane and in good contact with the ground.		
9.	3 points of contact with the ladder could be maintained while climbing along or working on the ladder.		

Reference Materials

1. Occupational Safety and Health Ordinance, Cap 509 and its subsidiary regulations
2. Factories and Industrial Undertaking Ordinance, Cap 59 and its subsidiary regulations
3. Code of Practice for Metal Scaffolding Safety, Labour Department
4. A Guide to the Provisions for Safe Places of Work under Part VA of the Construction Sites (Safety) Regulations, Labour Department
5. Guidebook on Prevention against Fall from Height, Labour Department
6. Construction Site Safety and Health Checklist, Labour Department
7. Guidebook on Safe Systems of Work, Labour Department
8. Safety leaflet on Five steps to risk assessment, Labour Department
9. 使用輕便工作台及流動工作台的安全指南, Occupational Safety and Health Council

Feedback Form [GUIDELINES on Work-above-ground Safety]

Thank you for reading this publication. To improve our future editions, we would be grateful to have your comments.

(Please put a “✓” in the appropriate box.)

1. As a whole, I feel that the publication is:	Stongly Agree	Agree	Neutral	Disagree	Stongly Disagree
Informative	<input type="checkbox"/>				
Comprehensive	<input type="checkbox"/>				
Useful	<input type="checkbox"/>				
Practical	<input type="checkbox"/>				
2. Does the publication enable you to understand more about the Work-above-ground Safety?	Yes		No	No Comment	
	<input type="checkbox"/>				
3. Have you made reference to the publication in your work?	Quite Often		Sometimes	Never	
	<input type="checkbox"/>				
4. To what extent have you incorporated the recommendations of the publication in your work?	Most		Some	None	
	<input type="checkbox"/>				
5. Overall, how would you rate our publication?	Excellent	Very Good	Satisfactory	Fair	Poor
	<input type="checkbox"/>				
6. Other comments and suggestions, please specify (use separate sheets if necessary).					
Personal Particulars (optional):*					
Name: Mr./Mrs./Ms./Dr./Prof./Ir/Sr^ _____					
Company: _____					
Tell: _____					
Address: _____					
E-mail: _____					

* The personal data in this form will be used only for this survey. Your data will be kept confidential and dealt with only by the Construction Industry Council.

^ Circle as appropriate.

Please return the feedback form to:

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